# 2024 Annual Progress Report

Reporting Period

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By

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# I. EXECUTIVE SUMMARY

As we reflect on the past year, I am excited to share the progress the Cheetah Conservation Fund has made in our mission to secure a future for the cheetah. Despite the growing pressures on wildlife globally, CCF has remained steadfast, innovative, and resilient in addressing the urgent challenges facing the world's most endangered big cat

The beginning of 2024 marked significant progress in cheetah conservation, highlighted by the inaugural Global Cheetah Summit held in Addis Ababa, Ethiopia, this past January. Following extensive months of preparation, the Cheetah Conservation Fund (CCF) successfully convened a wide range of government representatives and members of various non-governmental organizations to discuss the current challenges surrounding the illegal cheetah trade. Many attendees acknowledged that the Illegal Wildlife Trade (IWT) involving cheetahs is a complex and widespread issue, demanding coordinated, multi-level efforts from both governments and NGOs. Continued international cooperation offers renewed optimism that these collective efforts will help combat IWT and secure a future for the cheetah.

In Namibia, the resident cheetah population has decreased to 27 individuals compared to 32 at the end of 2023. During the year, we have been able to rewild 10 cheetahs, including two male cheetahs that have been in our care since they were juveniles. The resident cheetah population in Somaliland has remained stable at 96 cheetahs, which is a promising sign that our educational programs are making a difference in cheetah conservation and awareness in the region.

The Life Technologies Conservation Genetics Laboratory remains an important contributor to higher education by serving as an official internship site for fourth-year undergraduate students from the University of Namibia (UNAM) and the Namibia University of Science and Technology (NUST). Through this partnership, students can earn academic credits while gaining hands-on experience at the CCF laboratory. Much of the lab's work is ongoing and involves the analysis of long-term genetic data collected over multiple years.

This year has also seen the development of a second scat detection dog and handler team to increase our ability to conduct more field surveys compared to previous years. To date, the Scat Detection teams have walked a total of 102.7km of transects on CCF land and have found 29 potential scat samples as part of training exercises and opportunities sample collections. The team also found 30 potential cheetah samples offsite, contributing to Namibia's wide cheetah scat surveys. A fifth area in the N#a-Jaqna conservancy has been surveyed, where the team walked 49.5km and 59 carnivore samples were discovered, including six fresh African wild dog scats and the presence of approximately eight adult African wild dog tracks.

The Ecology team continues to monitor the weather and game on CCF's property. In 2024 we received a total of 378.59mm of rainfall. We have noticed a decrease in most of the common

game species in the area compared to the previous years, possibly due to the low rainfall received during this year's rainy season. The CCF giraffe population is doing very well, with a total of 139 observations, 37 were identified as male..

As part of its ongoing research initiatives, CCF has continued its collaboration with Vanier College in Canada on a long-term biodiversity project. This study focuses on evaluating the effects of bush encroachment on the plant and animal life of southern African savannas. Fieldwork conducted through this project is helping to establish baseline data, which will support future analysis of how bush clearing impacts various species. During this reporting period, CCF staff and research partners published six scientific journal articles, while fourteen additional papers have been accepted and are currently undergoing final revisions. Additionally, two Master's theses were completed as part of this research effort.

In September, CCF implemented a project funded by the UK Government, under the Darwin initiative. The project, titled "Undertaking Human-wildlife coexistence toolkit for biodiversity conservation and rural community sustainability", will address threats to biodiversity conservation and rural poverty by developing a model (toolkit) for human-wildlife coexistence within communal conservancies of Namibia. The effectiveness of the community-centred model will be assured through robust spatio-temporal understanding of conflict patterns, processes, and drivers. We will integrate social science, ecological and genetic techniques to generate the knowledge required for toolkit development. The coexistence model will empower communities and will be implemented demonstratively in conflict hotspots identified through the project.

To date, CCF has placed 780 dogs through its Livestock Guardian Dog (LGD) program, including 19 puppies placed so far this year. This program has proven to be a highly effective strategy for promoting coexistence between farmers and predators such as cheetahs. Over the past six months, seven puppies were born, and ten were successfully placed on farms. These placements include puppies born late last year that were not yet old enough to be placed in 2023. Currently, 18 dogs are part of CCF's LGD breeding program.

Namibia's tourism industry has reached record levels following its recovery from the impacts of COVID-19. At CCF, we welcomed 17,257 tourists during this reporting period—an increase of 9% compared to the same timeframe last year. We are also seeing a steady rise in the number of overnight guests staying at both Cheetah View Lodge and Babson House.

CCF East Carnivore Conflict Field Station continued to work with livestock farmers and building relationships with stakeholders in our efforts to assist affected communities with human-wildlife conflict issues, especially with cheetahs. In our most recent project at the field station, the Predator Early Warning System (EWS) project was launched in August 2021. The aim of the EWS project is to minimise HWC involving cheetahs on these farms by serving as an early warning system through the GPS collars that transmit information via email, SMS or

WhatsApp when there is a breach of the virtual fence. By the end of this reporting period, 45 farmers covering 89 farms have engaged in the EWS project.

CCF has been able to focus more on our educational programs and visit a large number of schools this year compared to the previous few years. During this reporting period, multiple local schools participated in CCF's Future Conservationist of Africa (FCA) programme. A total of 23,295 Namibian learners and 624 teachers participated in our outreach and centre-based educational programs. We also hosted nine overnight international groups from the USA plus students from universities in the USA, Australia, UK, France, Italy and Germany. This was an increase compared to last year's six internal groups. CCF also visited 39 villages identified as HWC areas in the Waterberg Conservancy and 1,321 farmers and community members participated in the Future Farmers of Africa (FFA) programme.

All of these would not have been possible without the great team at CCF. I am so grateful to be surrounded by an incredible team and supportive friends from all over the world.

CCF's work is funded through donations, grants and eco-tourism. I hope you will continue to support the successful research, education, and conservation programs including the fight against Illegal Wildlife Trade. Saving the cheetah means saving the world. Won't you join us?

Laurie Marker, DPhil.

Founder and Executive Director

# II. ORGANISATIONAL STRUCTURE

The Cheetah Conservation Fund (CCF) is an international organisation with registered not-for-profit organisations in Namibia, the United States, Canada, the United Kingdom, Australia, and Italy. In addition, CCF has Memoranda of Understanding with partner fundraising organisations in the Netherlands, France, and Germany.

CCF's International Research and Education Centre in Namibia is the primary base for all of CCF's global activities. In 1991 CCF became a Namibian Voluntary Trust and in 2002 was registered as a not-for-profit Namibian Section 21 Company. CCF Namibia's Board of Directors is composed of leaders in the local community, businesses, and agricultural sectors. Additionally, there is an International Scientific Board of Advisors that assists in planning and advising on research projects. CCF's Executive Director, Dr Laurie Marker, is assisted in the management and operations of CCF by a core professional staff aided by short-term volunteers and students who assist with daily operations and data collection.

The CCF Namibia's Centre includes the farms Elandsvreugde, Osonanga (two sections), Boskop (Khayam's Kopje), Cheetah View, Bellebenno, Janhelpman, Bynadaar, Padberg, and Otjenga totalling 58,067 hectares. CCF's Namibian Centre is in prime cheetah habitat and a wildlife-friendly area, with many neighbouring farmers who believe in conservation ethics. This ensures a large prey population, which is important for the cheetah population and serves to provide a model for farmers to demonstrate that they can live harmoniously with cheetahs.

CCF Namibia is an active member of the Waterberg Conservancy, which encompasses over 175,000 hectares of private farmland surrounding the Waterberg Plateau Park: a national game park dedicated to rare and endangered species. The conservancy's farmers cooperatively manage the land's wildlife for long-term sustainability that in turn provides habitat and prey base for the cheetah. CCF also sits on the Steering Committee of the Greater Waterberg Landscape, an area comprising 16,000 km2, or close to 2 million hectares, around the Plateau and in the Eastern Communal Lands.

CCF Namibia participates in many environmental groups including the Namibian Environmental Educators Network, the Namibian Chamber of Environment, and the Namibian Biomass Industry Group. There are close interactions with both major Namibian Universities.

# III. RESEARCH

During 2024, the Cheetah Conservation Fund continued working towards achieving its research objectives and strengthening collaborative efforts. Research continued in overall health and genetics, ecological surveying, cheetah releases, and ecosystem research.

## A. Population Dynamics

At the end of December 2024, the number of CCF's captive cheetah population was 27 individuals (11M, 16F) as well as 1 male African wild dog, compared to December 2023, 32 individuals (14M, 18F).

Throughout 2024, there were 3 deaths: 2 cheetahs (2M) and 1 male African wild dog, 3 transfers in (2M, 1F), and 6 transfers out (3M, 3F).

<u>The 3 (1M, 2F) transfers in were:</u>

- 3 orphaned cubs 2 males (AJU2205, AJU2206) and 1 female (AJU2207) approx. 7 weeks old, came in on the 15th of April from Omatjene Agriculture Research Station, about 25 km outside of Otjiwarongo. They were found, skinny and dehydrated, by workers.

<u>The 6 transfers out were:</u>

- On 24th January 2 male cheetahs named Josh (AJU2061) and Kabaka (AJU2016) were transported to Erindi Private Game Reserve.
- On 27th February 3 cheetahs (1M, 2F – AJU2199, AJU2200 and AJU2201) released on Farm Elandsvreugde #367.
- On 11th of July 1 female cheetah (AJU2204) was released on Farm Elandsvreugde #367

<u>The 3 (2M, 1F) deaths were:</u>

- 1 approx. 7 week old male cheetah (AJU2206) on 17th of April. He and his siblings arrived on the 15th of April (see above). He passed due to prolonged starvation/malnutrition.
- 1 male African wild dog named White Collar (LPI0002) aged 7 years. Euthanized on the 4th of May, due to suspecting pulmonary effusion and possibly DIC.
- 1 male cheetah named Al Pacino (AJU2058), approx. 14-years -old, was euthanized on the 31st of October, due to quality of life reasons.

# B. Medical Examinations

Between January 1st and December 31st 2024, CCF performed a total of 26 medical examinations under anaesthesia on 18 (10M, 8F) individuals (section B.1.1, table 1). Four (2M, 2F) of these cheetahs, and an additional 13 (4M, 9F), also received medical care and/or blood draws without anaesthesia (section B.1.2, Table 2), leading to a total of 31 (14M, 17F) individuals that received veterinary attention during this time period. All resident cheetahs received their vaccine booster for rabies and other feline specific diseases.

The overview of examinations with and without anaesthesia (B.1.1 and B.1.2) is followed by a case description of examinations of each individual animal (B.2). Case descriptions are grouped according to the origin and/or fate of the animal (captive B.2.1, related to release B.2.2, wild B.2.3), with a separate section for dental examinations (B.2.4).

Of the 31 animals examined during this time period, 15 (5M, 10F) are captive individuals (B.2.1), 8 (6M, 2F) cheetahs were either release cheetahs, offspring of release cheetahs, or received examinations in preparation of a release (B.2.2), and 8 (3M, 5F) cheetahs were of wild origin and were or will be released back into the wild as soon as their age and condition allow (B.2.3).

Ten (8M, 2F) cheetahs died during this time period and if the bodies were retrieved and/or not too decomposed, their necropsies were performed (section B.3).

Non-cheetah carnivore examinations and necropsies are covered in section B.4.

## B.1 Overview of examinations

### B.1.1 Examinations under Anesthesia

Each cheetah that is examined under anaesthesia by CCF, both captive and wild, is assessed for general health and fitness. The examinations follow standard protocols for health assessment, measurements, and sample collection. Male examinations include semen collection and female examinations include the collection of vaginal swabs. The semen is analysed, and sperm frozen viably; all samples are stored in the Genome Resource Bank (GRB). The 26 examinations performed between January 1st and December 31st 2024, are presented in Table 1 in chronological order.

**Table 1:** Summary of medical examinations performed under anaesthesia on wild and captive cheetahs during the reporting period, in chronological order. Reasons for exam include: Wild (wild animal on initial arrival to CCF); Entry (arrival of a captive cheetah from another facility or a wild cheetah remaining at CCF after examination); routine (routine health check); EEJ (electro-ejaculation procedure performed for sperm collection); dentistry; medical (treatment of any injury or illness, medical procedures not including dentistry & oral surgery); and relocation, collaring, or re-collaring.

| ID | Sex | Name | Exam date | Reason for exam |
|---|---|---|---|---|
| **AJU1780** | M | West | 06-Jan-24 | Medical |
| **AJU1786** | M | Thor | 06-Jan-24 | Medical |
| **AJU1772** | M | Katiti | 11-Jan-24 | Medical |
| **AJU2016** | M | Kabaka | 22-Jan-24 | Relocation |
| **AJU2061** | M | Josh | 22-Jan-24 | Relocation |

| | | | | |
|---|---|---|---|---|
| **AJU2199** | M | Max | 22-Jan-24 | Wild |
| **AJU2200** | F | Nicky | 22-Jan-24 | Wild |
| **AJU2201** | F | Pia | 22-Jan-24 | Wild |
| **AJU2200** | F | Nicky | 24-Jan-24 | Collaring |
| **AJU2201** | F | Pia | 24-Jan-24 | Collaring |
| **AJU2201** | F | Pia | 25-Jan-24 | Re-Collaring |
| **AJU2199** | M | Max | 26-Jan-24 | Collaring |
| **AJU2159** | M | AJU2159 | 06-Mar-24 | Collaring |
| **AJU2160** | F | AJU2160 | 06-Mar-24 | Collaring |
| **AJU2161** | F | AJU2161 | 06-Mar-24 | Collaring |
| **AJU1923** | M | Rocket | 02-Jul-24 | Medical |
| **AJU2204** | F | Jet Lea | 10-Jul-24 | Collaring |
| **AJU1779** | M | Max | 14-Aug-24 | Re-Collaring |
| **AJU1780** | M | West | 14-Aug-24 | Re-Collaring |
| **AJU1603** | F | Tiger Lilly | 21-Aug-24 | Medical |
| **AJU1603** | F | Tiger Lilly | 03-Sep-24 | Dentistry |
| **AJU2205** | M | Etango | 21-Oct-24 | Routine |
| **AJU2207** | F | Zephyr | 21-Oct-24 | Routine |
| **AJU2203** | F | Delilah | 25-Dec-24 | Medical |
| **AJU2203** | F | Delilah | 27-Dec-24 | Medical |
| **AJU2203** | F | Delilah | 31-Dec-24 | Medical |

### B.1.2 Examinations Without Anesthesia

Most of the captive cheetahs at CCF have been trained to go into a squeeze cage, which allows the veterinary team to do a basic visual examination, administer vaccines and basic treatments, or draw blood without anaesthesia. Small cubs can sometimes also be examined with just physical restraint.

Voluntary blood draws provide valuable diagnostic information without subjecting the cheetahs to stress or medical procedures. They provide insight into organ function (e.g., kidney and liver) and allow identification of potential health concerns at an early stage, facilitating timely implementation of disease management plans. This health monitoring is particularly important for cheetahs aged 10 years and above.

Between January 1st and December 31st 2024, CCF performed over 50 blood draws and proceeded with five medical treatments without related anaesthesia on a total of 17 (6M, 11F) individuals (Table 2).

**Table 2**: Summary of voluntary blood collection and cases not requiring anesthesia on captive cheetahs during the reporting period.

| ID | Sex | Name | Age | Collection and/or treatment date/frequency | Reason |
|---|---|---|---|---|---|
| **AJU1640** | F | Rainbow | 12 years old | Monthly | Routine Monitoring |
| **AJU1771** | F | Bella | 8 years old | Monthly | Chronic disease monitoring |
| | | | | Daily | Chronic Disease Treatment - Fluids |
| **AJU2058** | M | Al Pacino | 14 years old | Every 2 months | Routine Monitoring |
| | | | | 03-Apr-2024 | Medical – Eye Lesion |
| **AJU1600** | F | Senay | 14 years old | Every 2 months | Routine Monitoring |
| **AJU1601** | M | Peter | 14 years old | Every 2 months | Routine Monitoring |
| **AJU1603** | F | Tiger Lilly | 14 years old | Every 2 months | Routine Monitoring |
| **AJU1641** | F | Aurora | 12 years old | Every 3 months | Routine Monitoring |
| **AJU1582** | F | Polly | 15 years old | Every 3 months | Routine Monitoring |
| | | | | Daily | Chronic Disease Treatment - Fluids |
| **AJU1922** | F | Nandi | 10 years old | Every 3 months | Routine Monitoring |
| **AJU2059** | F | Marissa | 13 years old | Every 3 months | Routine Monitoring |
| **AJU1923** | M | Rocket | 5 years old | 13-Mar-24 | Medical - Limp |
| **AJU2205** | M | Etango | 6 weeks old | 15-Apr-24 | Wild cheetah exam, cub |
| **AJU2206** | M | AJU2206 | 6 weeks old | 15-Apr-24 | Wild cheetah exam, cub |
| **AJU2207** | F | Zephyr | 6 weeks old | 15-Apr-24 | Wild cheetah exam, cub |
| **AJU1992** | M | Hans | 5 years old | 29-Apr-24 | Medical - Limp |
| **AJU1910** | F | Jaya | 5 years old | 13-Nov-24 | Medical - Wound |
| **AJU2194** | F | Kweli | 1 year old | 13-Nov-24 | Medical - Wound |

## B.2 Case descriptions

### B.2.1 Captive Cheetahs

Between January 1st and December 31st 2024, 15 (5M, 10F) captive cheetahs received a health-related medical examination (with or without anaesthesia). Of the 15 cheetahs, 6 (1M, 5F) only had routine blood draws for monitoring purposes, without an associated case. The remaining 9 (4M, 5F) cheetahs are described hereafter. Details of their on- and off- site procedures and monitoring are provided hereafter in order of ascending AJU numbers.

**AJU1603 (Tiger Lilly),** a 14-year-old resident female, was found to have a significantly decreased appetite, accompanied by excessive vomiting, in August 2024. A workup conducted on August 21, 2024, revealed a broken left incisor (203) as well as gastritis. She was treated with a course of antibiotics for the gastritis, and the vomiting subsequently resolved. Her tooth was treated in September 2024 (see Dentist Section B.2.4)

**AJU1682 (Polly),** a 15-year-old resident female, showed signs of dehydration (e.g., sunken eyes) on 5th December 2024. Blood values indicated an acute kidney injury. She was placed on a treatment plan of daily fluids and renal supplements. Monthly blood draws will be performed going forward to monitor her response to the ongoing treatment.

**AJU1771 (Bella),** an 8-year-old resident female, had been diagnosed with acute kidney injury in December 2023. Her treatment continues with daily fluids and renal supplements, and her kidney values are monitored through monthly blood draws.

**AJU1772 (Katiti)**, an 8-year-old resident male, displayed signs of discomfort in the mouth. An examination under anesthesia was performed on 11th January 2024 and although no foreign body was found, peri-lingual bruising was found. He was treated with systemic anti-inflammatories. Cause of the bruising is suspected to have been a foreign body that dislodged on its own.

**AJU1910 (Jaya),** a 5-year-old resident female, had a bite wound on the inside of her back left leg, on 13th November 2024. The wound was resolved with systemic anti-inflammatories for 5 days and a 7-day-course of antibiotics.

**AJU1923 (Rocket),** a 5-year-old resident male, was limping on his right hind leg which he had previously dislocated, on 13 March 2024. He was treated with systemic anti-inflammatories for 5 days and put on confined rest for 2 weeks but failed to improve. A work-up was performed on 2nd July 2024 and X-rays did not indicate any further problems. He was put on another course of systemic anti-inflammatories. The limp has since improved, but is still present.

**AJU1992 (Hans),** a 5-year-old resident male, was limping on his right hind leg on 29th April 2024, he was treated with systemic anti-inflammatories for 3 days and put on confined rest for 5 days and the limp has since resolved.

**AJU2058 (Al Pacino),** a 14-year-old resident male, developed a cloudy appearance in his left eye on 3rd April 2024. After close examination, he was diagnosed with corneal pannus, a condition characterized by the growth of fine blood vessels onto the clear corneal surface, as well as corneal ulcers. He was placed on long-term treatment with steroid eye drops; however, the cloudiness spread to both eyes, and persistent ulcers appeared. By October 2024, he was blind and developed neurological signs, making even food intake difficult. Due to the extreme deterioration of his quality of life, a decision was made to euthanize him on 31st October 2024.

**AJU2194 (Kweli),** a 1-year-old resident female, had a bite wound on her back right foot, on 13th November 2024. She was treated with systemic anti-inflammatories for 5 days and a 7 day course of antibiotics and the wound has since resolved.

### B.2.2 Release-related Cheetahs

Between January 1st and December 31st 2024, 8 (6M, 2F) release-related cheetahs received veterinary attention. Details of their on- and off- site procedures and monitoring are provided hereafter in order of ascending AJU numbers.

**Release males, AJU1779 (Max),** and **AJU1780 (West)** were captured on Erindi Private Game Reserve for re-collaring on 14th August 2024. A general veterinary check, including sample collection and measurements were done in the field. They were released back on the same reserve on the same day. Note that AJU1780 had been treated for a laceration earlier that year (see next point), and both were found dead end of 2024 (see section B3).

**Release males AJU1780 (West)** and **AJU1786 (Thor)** were treated at Erindi Private Game Reserve by wildlife veterinarian Dr Ulf Tubbesing for a laceration in the axillary region and limping, respectively, on 6th January 2024.

**Males AJU2016 (Kabaka)** and **AJU2061 (Josh)** were relocated to Erindi Private Game Reserve for soft-release. A general veterinary check, including collaring, sample collection, EEJ and measurements was done at CCF on 22 January 2024 before relocation.

**AJU2159 (M), AJU2160 (F),** and **AJU2161 (F)**, offspring of release female AJU1785, were captured on Erindi Private Game Reserve. A general veterinary check, including collaring, sample collection and measurements were done in the field on 6th March 2024. They were released back on the same reserve on the same day.

### B.2.3 Wild Cheetahs

Between January 1st and December 31st 2024, 8 (3M, 5F) wild cheetahs received veterinary attention. Details of their on- and off- site procedures are provided hereafter in order of ascending AJU numbers.

**Wild cheetah group AJU 2199 (Max), AJU2200 (Nicky),** and **AJU2201 (Pia)** were captured on a farm in Gobabis district. A general veterinary check, including collaring, sample collection and measurements was done between January 22nd and January 26th 2024. The group was released on the CCF reserve.

**Wild female AJU2203 (Delilah)** was**)** was captured on a farm before being brought to CCF on 17th December 2023. A general veterinary examination, including sample collection and measurements, was performed on 27th December 2023. On 25th December 2024t she sustained a severe fracture in her back right leg (femur). She was transported to Rhino Park Veterinary Practice, where Dr. Ulf Tubbesing performed surgery to place a plate and secure the bone on 27th December 2024. She was anaesthetized again on 31st December 2024 to monitor her recovery, change bandages and clean the surgical wound. Monitoring will continue for further bandage changes, follow-up X-rays to assess bone calcification and healing and stitch removal.

**Wild female AJU2204 (Jet Lea)** was cleared for release on 10th July 2024. An updated general veterinary check, including sample collection and measurements was performed as well as a pre-release collaring. The female was released on 11th July 2024.

**Male cubs AJU2205 (Etango), AJU2206,** and **female cub AJU2207 (Zephyr)**, estimated to be 6 weeks old, were found by a farmer in the Otjiwarongo district on 15th April 2024. They were confiscated by the Ministry of Environment, Forestry, and Tourism, and brought to CCF on the same day. The cubs were evaluated, stabilized, and treated for dehydration under physical restraint. Cub AJU2206 died of starvation (see section B3), while the other two were healthy enough to receive their vaccinations and will be raised at CCF until their eventual release. A general veterinary check, including sample collection, transponder implantation, rabies booster, and measurements, was conducted on 21st October 2024.

### B.2.4 Dental Examinations

Between January 1st and December 31st 2024, one dental examination was performed on a cheetah (1F). Dental check-ups and cleaning were performed by Dr. J.H. Haast of Dr. J.H. de

Haast & M. Van der Westhuizen Dentists in their surgery in Otjiwarongo. The one cheetah that received dental procedures is described here:

**Resident female AJU1603 (Tiger Lilly)** was transported to Dr. J.H. de Haast & M. Van der Westhuizen Dentists on 3rd September 2024 to perform a dental work up on her broken left incisor (203). The tooth was checked for infection, cleaned, and filled to prevent further complications

## B.3 Deaths, Euthanasia, and Necropsies

Between January 1st and December 31st 2024, one (1M, 0F) resident cheetah, and 9 (7M, 2F) wild cheetahs died (table 3). Case descriptions are found under section B.2 and animals that died without case history are described hereafter in order of ascending AJU numbers.

**Table 3**. Summary of animals that died (natural mortality and euthanasia) and/or were necropsied during the reporting period, ordered by date of death with details regarding date of necropsy, age at death and cause of death.

| AJU# | Name | date of death | date of necropsy | Age at death | Cause of death |
|---|---|---|---|---|---|
| **AJU2206** | AJU2206 | 17-Apr-24 | 17-Apr-24 | Approx. 6 weeks | Starvation |
| **AJU2195** | Scarlett | 24/25-Apr-24 | N/A | 7 years | Unknown; body not retrieved |
| **AJU2016** | Kabaka | 14-Jul-24 | 17-Jul-24 | 4 Years | Killed by lion |
| **AJU2061** | Josh | 14-Aug-24 | Insufficient remains | 3 Years | Killed by crocodile |
| **AJU2211** | AJU2211 | 19-Aug-24 | 28-Aug-24 | Approx. 3 years | Blunt force trauma |
| **AJU2058** | Al Pacino | 31-Oct-24 | 31-Oct-24 | 14 years | Humane euthanasia |
| **AJU2103** | Atlanta | 23-Nov-24 | 23-Nov-24 | 4 years | Humane euthanasia |
| **AJU1898** | Ben | 28-Nov-24 | Insufficient remains | 6 Years | Killed by hyena |
| **AJU1780** | West | 30-Nov-24 | Insufficient remains | 7 Years | Killed by leopard |
| **AJU1779** | Max | 01-Dec-24 | 10-Dec-24 | 7 Years | Killed by lion |

**Release male AJU1779 (Max)** was 7 years old when he was found dead on 1st December 2024. He was collared and released in Erindi Private Game Reserve in 2022. The cause of death was determined to be from a lion attack.

**Release male AJU1780 (West)** was 7 years old when he was found dead on 30th November 2024. He was collared and released in Erindi Private Game Reserve in 2022. The cause of death was determined to be from a leopard attack. A necropsy was not feasible due to the little remains recovered.

**Release male AJU1898 (Ben)** was 6 years old when he was found dead on 28th November 2024. He was collared and released in Erindi Private Game Reserve in 2022. The cause of death was determined to be from a pack of hyenas hyenas. A necropsy was not feasible due to the little remains recovered.

**Release male AJU2016 (Kabaka)** was 4 years old when he was found dead on 14th July 2024. He had been collared and released in Erindi Private Game Reserve in 2024. The cause of death was determined to be from a lion attack. A necropsy took place on 17th July 2024.

**Release male AJU2061 (Josh)** was 4 years old when he was found dead on 14th August 2024. He had been collared and released in Erindi Private Game Reserve in 2024. The cause of death was determined to be from a crocodile attack. A necropsy was not feasible as the body was too decomposed.

**Wild male AJU2103 (Atlanta),** offspring of release female AJU1670 was 4 years old when he was found paralysed in his hind legs due to a lion attack on 23rd November 2024. Due to the extreme nature of the injuries, a decision was made to euthanize him the same day.

**Wild female AJU2195 (Scarlett)** was approximately 7 years old when she was found dead on a farm on 26th April 2024. She had been collared and released in the Gobabis region in 2023. A necropsy was not feasible as the body was not recovered.

**Cub AJU2206 (M)** was approximately 6 weeks old when it was brought in poor condition on April 15th 2024 along with its siblings (AJU2205 and AJU2207; see case reports Section B.2.3). AJU2206 died on April 17th 2024 and necropsy revealed that AJU2206 died of hypoglycemia due to gastric ileus.

**Wild female AJU2211** was approximately 3 years old when she was found dead on the B1 who was killed due to blunt force trauma from a car on 19th August 2024; she was necropsied on 28th August 2024.

## B.4 Non-cheetah Carnivore Examinations and Necropsies

### B.4.1 African Wild Dogs

In June 2024, the African wild dog, LPI0001 (Zebra Legs) was vaccinated and dewormed.

Between January 1st and December 31st 2024, one medical examination was performed on an African wild dog.

**Resident African wild dog male (LPI0002),** was found unresponsive on May 3rd 2024. On examination, it was found that he had a gastric dilatation and volvulus (GDV) and was also in acute renal failure. In the early hours of May 4th2024, LPI0002 was euthanized after quality-of-life considerations. The cause of the kidney injury is determined to be a complication from right sided dilated cardiomyopathy, Vegetative Valvular Endocarditis of the Mitral valve and the Gastric Dilation Volvulus.

### B.4.2 Other Carnivores

Between January 1st and December 31st 2024, CCF performed two necropsy examinations on leopards and one on an African wild cat.

**A wild female leopard (NA-PPA0102)** was presented for necropsy on 10th June 2024. According to the farm owner she was killing livestock on the farm where she was shot on 10th June 2024. The cause of death was a gunshot to the head.

**A wild female leopard (NA-PPA0103)** was presented for necropsy on 14th August 2024. According to the farm owner she had killed seven calves on the farm where she was shot on 14th August 2024. The cause of death was a gunshot to the head.

**A wild male African wild cat (NA-FSI0012)** was presented for necropsy on 14th October 2024. According to the farm owner she was found dead in a rocky outcrop on the farm on 13th October 2024. Cause of death hypertrophic cardiomyopathy.

**Table 4**. Summary of animals that died (natural mortality, euthanasia and presented for necropsy) and/or were necropsied during reporting period, ordered by date of death with details regarding date of necropsy, age at death and cause of death.

| ID # | Name | Date of death | Date of necropsy | Age at death | Cause of death |
|---|---|---|---|---|---|
| **LPI0002** | White collar | 03-May-24 | 04-May-24 | Approx. 6 years | Humane euthanasia |
| **NA-PPA0102** | NA-PPA0102 | 10-Jun-24 | 10-Jun-24 | Approx. 3 years | Gunshot to the head |
| **NA-PPA0103** | NA-PPA0103 | 14-Aug-24 | 14-Aug-24 | Unknown | Gunshot to the head |
| **NA-FSI0012** | NA-FSI0012 | 13-Oct-24 | 14-Oct-24 | Approx.2 years | Hypertrophic Cardiomyopathy |

# C. Health and Reproduction

## C.1. Genome Resource Bank

Since 1991, CCF has been systematically collecting samples on all cheetahs worked up. Blood (whole blood, serum, plasma, white and red blood cells), hair, and skin samples are banked as part of CCF's Genome Resource Bank (GRB), with some backups held at the Smithsonian Institution in the USA. Additionally, an increasingly extensive scat sample collection from wild cheetahs in Namibia and neighbouring countries is kept at CCF. And, since 2002 CCF has also been collecting, evaluating, and viably freezing cheetah sperm. All samples are part of CCF's GRB. Since 1991, blood and tissue samples have been obtained from over 1,000 individual cheetahs, including samples from other countries (e.g., Somaliland). These samples are used for overall health assessment, as well as biomedical and genetic research. Currently, CCF holds the world's largest wild cheetah database of biological material, which also creates the need to curate all the samples and the development of database management systems. In 2024, there has been no collection event performed at CCF.

# D. Conservation Genetics

## D.1. Life Technologies Conservation Genetics Laboratory

The Life Technologies Conservation Genetics Laboratory (formerly known as the Applied Biosystems Genetic Conservation Laboratory) was set up in 2008/2009 by Dr Anne Schmidt-Küntzel for CCF, thanks to the generous support of Life Technologies Inc. (formerly Applied Biosystems, today Thermo Fisher Scientific) and the Ohrstrom Foundation. In 2014, Thermo Fisher Scientific donated a refurbished 4-capillary genetic analyser, which greatly increased the capacity of the laboratory until April 2021 when it broke. In 2015, the genetics laboratory moved to the new Visitor Centre. This laboratory was designed with a forensic laboratory layout and is larger to be able to host visiting scientists and university interns. In

2021, a new analyser was purchased from Thermo Fisher Scientific, as part of a major laboratory upgrade, which also included the expansion of the database system in all the laboratory areas, a centralised temperature monitoring system for the freezers, PCR machines, a qPCR machine, a spectrophotometer, a new gel imaging system and centrifuges. The new equipment replaced the second-hand equipment that were obtained in 2008 and were no longer fully reliable.

The laboratory's main aim is to contribute to the on-going research and conservation of cheetahs by working together with the ecology and biomedical departments in CCF's cross-disciplinary mode of operation. The main genetics projects are related to cheetah population structure, census, relatedness, investigation of illegal trade samples, and assignment of individual ID to non-invasive samples such as scat. The majority of projects are Namibia-based, but collaborative projects on samples of international origin are also performed. Projects related to other species are performed with outside funding and are currently limited to collaborative projects.

The current team consists of Laboratory Manager Hafeni Hamalwa (MSc), who first joined CCF as an intern in early 2017. Geneticist Dr Shweta Singh who joined the laboratory in April 2024, and Genetics Laboratory Assistant Tresia Shihepo (Hons), who initially joined the laboratory as intern in early 2023.

CCF's genetics laboratory is an official placement for final-year undergraduate students of the University of Namibia (UNAM) since 2017 and of the Namibia University of Science and Technology (NUST) since 2018, allowing students to earn credit for their internship at the CCF laboratory. Michelle Daniels and Smthokozele Sikabong from NUST joined the laboratory for a four-week internship in August and November respectively.

The laboratory also trains recent graduates through its internship programme. Josephina Jahongo (Hons, from UNAM; March to August 2024), Elizabeth Simson (from NUST; March to May 2024), Lapaka Petrus (Hons, from UNAM) joined the laboratory for a six-month internship in August 2024. Bailey Arnold from the University of Nebraska-Lincoln joined the laboratory at the end of June for a two-month internship.

## D.1.1 Genetics Projects

### Cheetah genotypes of known individuals (blood/tissue samples)

As part of CCF's ongoing research at the genetics laboratory, DNA is extracted from all individuals for whom blood and tissue samples are available. All extracted DNA samples are assessed for quality via gel electrophoresis and genotypes obtained for 17 microsatellite markers. Those markers are amplified in five multiplex reactions to cut down on cost and optimise time. Additionally, new markers were designed to extend the genotypes. Sample collection started in 1992 however, up until the setup of the genetics laboratory in 2008, cheetah samples were sent to Dr Stephen O'Brien's laboratory at the National Cancer Institute, USA. Since 2008, blood and tissue samples from over 200 Namibian cheetahs have been extracted and an extended genotype was obtained. In 2022/2023 the dataset obtained over more than a decade was tidied up and curated to ensure all genotypes were translated

appropriately between instruments (three different analysers), chemistries (e.g., two POPs, various PCR mixes) and primer variants (including different dye weights) to allow for joint analysis of the entire dataset.

Cheetah genotypes of unknown individuals (scat samples) using non-invasive techniques

Since the identity of the cheetah is unknown for non-invasive samples, the first step is to obtain a genetic ID to assign an individual ID. Over a thousand samples have been collected over the years. Many of these scat samples were collected by the CCF ecology team or with the help of CCF's scat detection dogs Finn, Tiger, Enya and Mena. Other samples were obtained from collaborators from other conservation organisations, taxidermists, and the farming community. A set of microsatellite markers have been redesigned and optimised for scat samples and are used routinely in the laboratory. The sex of the individual is also determined genetically (Zn-Finger).

Coalitions of wild males around CCF centre: Over 950 scat samples were collected from a coalition of two wild cheetah males ('The Wild Boys': Hifi - AJU1543, and Sam - AJU1542) between July 2008 and October 2013 (AJU1542 died in Aug 2010, AJU1543 in October 2013). Samples were predominantly found around the CCF centre as part of a daily search effort as the two cheetah males were attracted by the captive female cheetahs. The sample collection represents an invaluable resource for long-term monitoring of physiological parameters such as diet, stress levels, and parasite load in two wild cheetahs. Parasite levels were assessed and recorded on a regular basis on fresh samples. Sample aliquots were taken from all genetically identified samples, and will be sent to the Smithsonian in the USA for hormone analysis throughout the year 2024 and 2025. For genetic analysis, a multiplex of four markers was designed to specifically differentiate the two males. A total of 586 samples were processed, to obtain 513 samples identified as either AJU1542 or 1543 and covering the entire five-year period with samples 3-5 days apart. The 73 other samples were assigned to another wild individual (n=6), captive cheetahs (n=3, found next to enclosure), non-cheetah carnivores (n=24), or had to be dropped as they failed to amplify (n=40) (Figure 1).

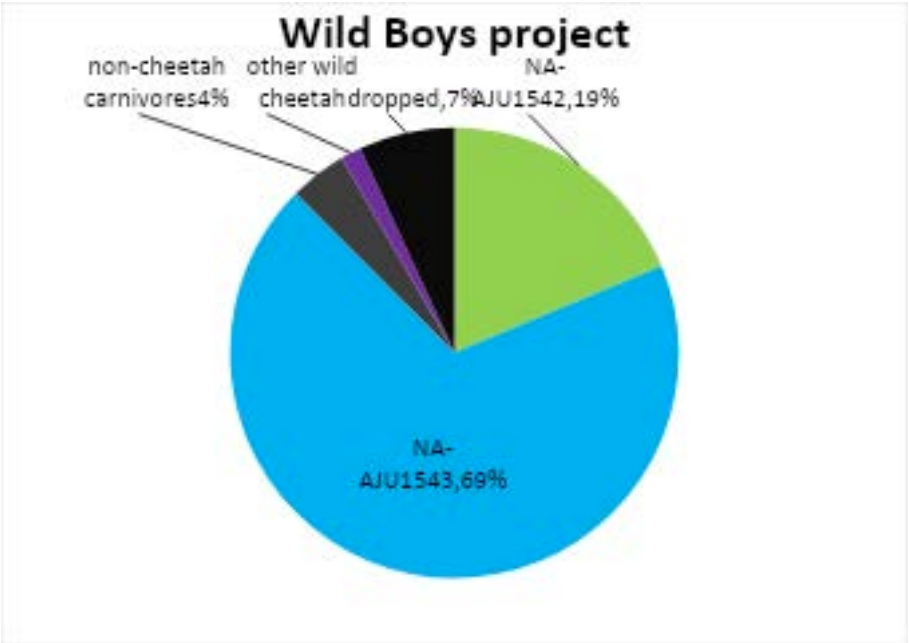



**Figure 1:** Results of genetic individual assignment for 586 scat samples collected as part of the 'Wildboy' project

Between August 2021 and September 2022, 210 suspected cheetah scat samples were collected from another coalition of two wild cheetah males ('The Rockstars': AJU2066 and AJU2067), which had included the CCF centre in its territory. The areas surrounding the cheetah enclosures were searched during the periods when the males were known to be present in the area (based on satellite collar information). A total of 90 samples were processed with a multiplex of three markers to obtain 70 samples identified as AJU2066 or AJU2067, and covering the one-year period with samples for every 3-5 days when possible.

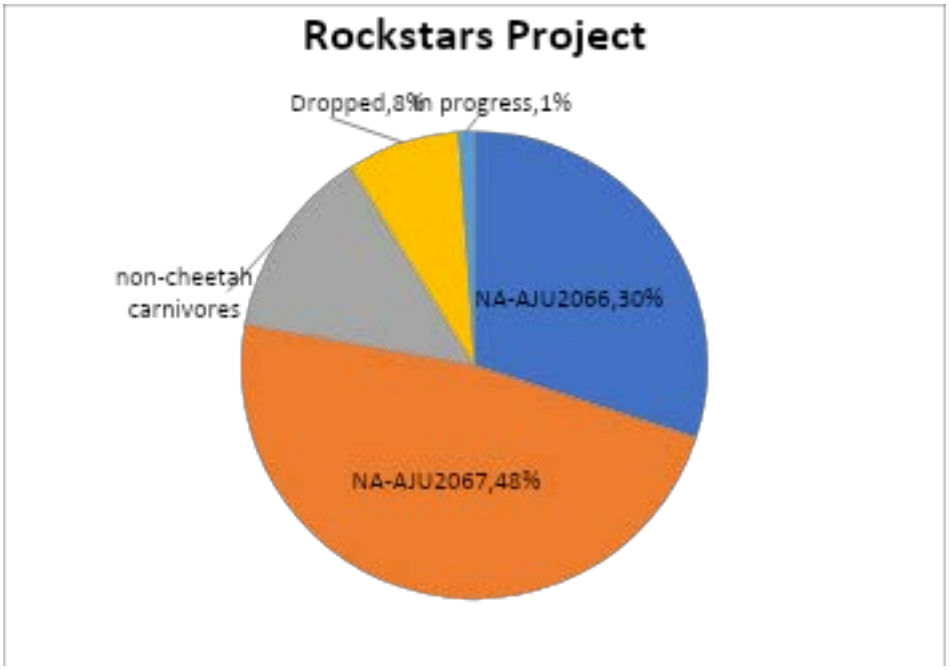



Figure 2: Results of genetic individual assignment for 90 scat samples collected as part of the 'Rockstar' project

Other suspected cheetah samples: All other suspected cheetah samples are analysed so that unique individuals can later be included in population studies. Over 400 samples were collected between 2008 and 2016, mostly around the CCF centre. An individual genetic cheetah ID could be assigned to 197 of these samples (corresponding to less than 20 individuals), 54 were assigned to other carnivore species using a mini-barcode sequencing approach. Since 2017, 517 cheetah scat samples were added to the sample collection, thanks to the extensive work of the scat detection dog team and include samples from surveys in other parts of Namibia. All samples collected until mid-2024, were extracted and their species ID confirmed. Of those, 344 were identified down to individual level and represented a minimum of 68 unique individuals.

Cheetah scat samples caught on camera trap: The data from scat samples collected at camera trap stations from CCF's camera trap surveys between 2008 and 2014 was part of Lucia Mhuulu's MSc research thesis, which she defended in June 2015. For this study, the genetic ID was combined with the visual ID from the camera traps, to pair a physical appearance to the genetic genotype without handling the animal. The study was conducted until January 2019.

Release study: Sixty-six release and pre-release scat samples were extracted and assigned to an individual cheetah in 2013. Once identified, an aliquot of these samples was sent to the Smithsonian Institution in the US to be analysed for faecal hormone levels.

### Verification of the accuracy of the scat detection dogs

The species of the scat samples found by the scat dogs and presumed to be cheetah is routinely verified using molecular markers.

## Illegal Trade

Illegal product trade: Starting in 2013, the species content of samples from illegal trade was assessed using molecular markers specifically designed to identify carnivore species in samples of poor quality. PCR products were taken to the United States by Dr Anne Schmidt-Küntzel to do next generation sequencing in a collaborator's laboratory.

Illegal pet trade of cheetah cubs: Between 2004 and December 2024, CCF has received over 2000 samples from 292 individuals (mostly cubs rescued from the illegal wildlife trade). A subset of 55 samples corresponding to a survey of illegal trade cases could be assigned to *A. j. soemmeringii*, the regional cheetah subspecies of the Horn of Africa, and provided a crucial link for the uplisting efforts of this subspecies (Schmidt-Küntzel et al., 2023; Figure 3). The uplisting of the subspecies took place in December of 2023.

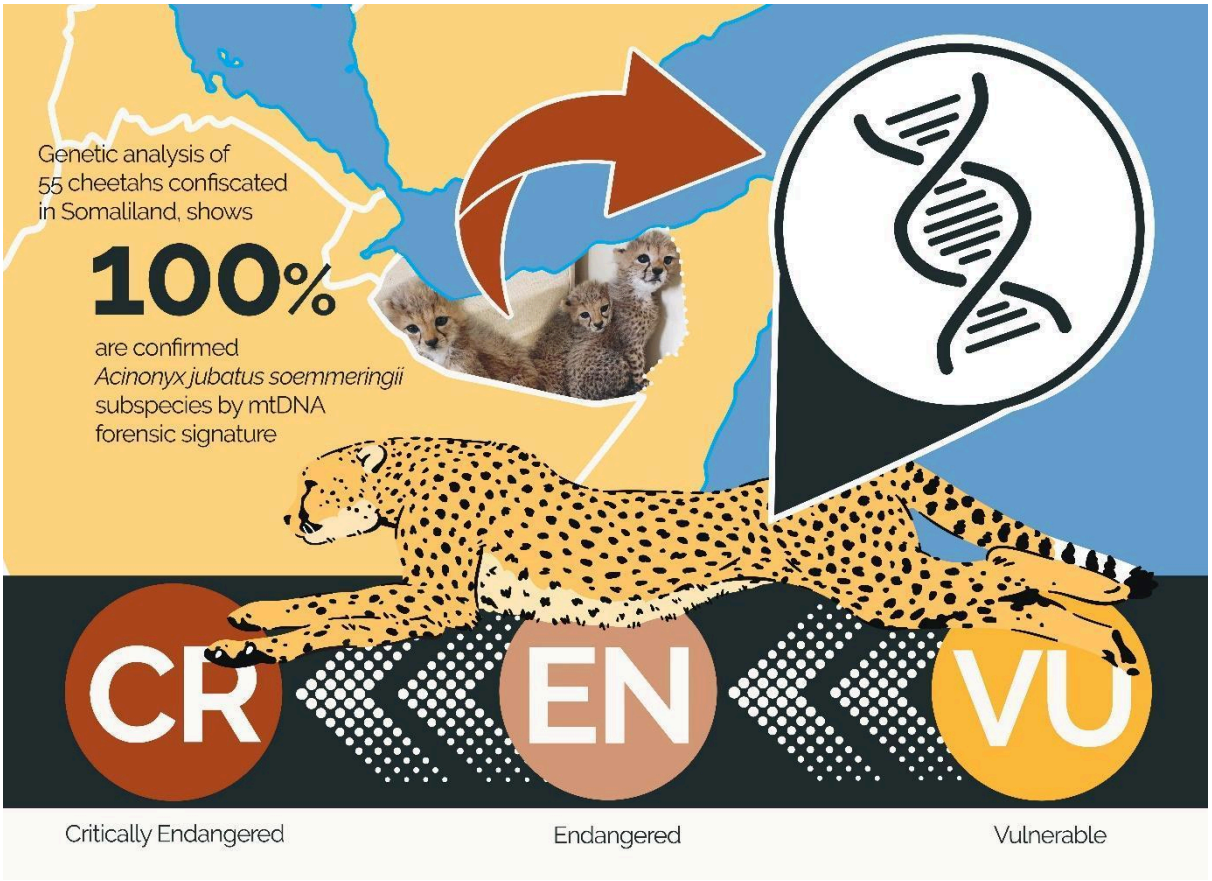



**Figure 3:** Conclusion drawn from the analysis of 55 cheetahs confiscated in Somaliland. Figure from Schmidt-Küntzel et al., 2023.

## Babesia

Starting in 2013, a trial study on Babesia was conducted, to determine the percentage of affected cheetahs that are currently at CCF and compare those to the results obtained from microscopic evaluation of blood smears from other captive cheetahs. We also developed a diagnostic test to be used for further screening of the samples. The initial testing was assigned to Shalette Dingle, a visiting Cornell veterinary student in 2013; since then, a more sensitive test was also tested with promising results. Cornell veterinary student intern Natasja Lavin read the blood slides corresponding to the genetic samples in mid-2015. In March 2016, Karen Holm, veterinarian and working guest, finalised the last samples for the existing data set. In 2018, veterinary student Armaghan Nasim trialled the diagnostic test for the detection of babesia in ticks collected from babesia-positive and negative cheetahs. She also collected ticks which are currently used to determine the effect of storing ticks in methylated spirits. DNA from ticks was extracted after 14 days, 24 days, 34 days, 3 months, 6 months, 15 months, 22 months, 29 months, 36 months, 42 months, 54 months, 59 months, 66 months and 72 months. The latest date of extraction was in August 2024. Further tests will be performed over the coming years.

### Carnivore diet

In 2014, visiting student intern Alicia Walsh from University of New Hampshire (USA) extracted DNA from 50 carnivore scat samples and verified the species they belong to using a mitochondrial marker. She also identified what the animals ate by using a variety of approaches including hair, bone, exoskeleton, and vegetation analysis. She published the project in the university's Inquiry journal in 2015. In 2016, a preliminary analysis of the diet composition was performed by ecology research assistant, Samara Moreira.

## D.1.2 Current Collaborative Genetics Projects

### Oxalate nephrosis in cheetahs

In March 2012, a collaboration on oxalate nephrosis was started with Dr Karen Terio from the University of Illinois and Dr Emily Lane from the National Zoological Gardens of South Africa. This collaborative project aims to investigate whether oxalate nephrosis in the cheetah is caused by mutations in the same genes as in humans and cats. A genetic component was supported by the preliminary analysis performed by Dr Anne Schmidt-Küntzel. Primers were designed by Dr Anne Schmidt-Küntzel, and tested and optimised at the CCF genetics laboratory in 2013. In 2013 and 2014, diseased individuals were tested in the laboratory of the South African collaborators. In the first half of 2015 a second gene was investigated. To date no candidate mutation was found. Results will be published once they are obtained. Additional research is required and will be pursued once funding is obtained.

### International cheetah samples

Over the years CCF has collected cheetah samples in Angola, Somaliland, and Niger, where no genetic studies have been performed to date. In addition, samples have been obtained from collaborators in Angola, Algeria, Botswana, and South Africa.

Angola: Dr Ezekiel Fabiano, who graduated from his PhD in genetics with CCF in 2013, brought Angolan cheetah and other carnivore faecal samples to CCF subsequently for them to be analysed at the genetics laboratory as part of an ongoing collaboration.

Kenya: In 2017, Action for Cheetahs Kenya sent MSc student Brian Solomon to CCF with DNA from scat and tissue samples. Since 2018, Hafeni Hamalwa has continued the laboratory work to complete the genotypes of the 172 samples and obtained his MSc degree in April 2022 on the mitochondrial haplotypes present in the Kenyan cheetah population. Hafeni continued to genotype the samples to obtain genomic data with microsatellite markers. This study was partially supported by the Rufford Foundation. Additional DNA was extracted and is awaiting shipment to CCF for processing in the country.

United Arab Emirates: A collaboration with cheetah holding facilities and veterinary clinics in the UAE was initiated in June of 2013. In 2014 sperm and genetic samples were collected on

males to start the country's Genome Resource Bank (GRB) of cheetahs. Blood samples from the males that were worked up, as well as additional individuals, were taken back to Namibia with the relevant permits for banking and analysis. The samples are currently being analysed to identify the provenance of the animals, of which a large proportion originate from the illegal trade.

## Carnivore species ID

Over 1000 carnivore scat samples were collected in 2009 in the scope of an ongoing collaboration on carnivore diversity with Professor Eduardo Eizirik. Visiting MSc student Amy Wong joined the laboratory in 2022 to determine the species of 157 samples collected systematically in 2009 and graduated in early 2023 ("The use of faecal mini-barcoding techniques for non-invasive carnivore surveys in bushland savannah, Namibia") with an award. The survey as well as an assessment of the barcode for southern Africa were published in 2024 (Wong et al., 2024, in review). Emma Reasoner, CCF staff and NUST MSc student spent time in the laboratory between August and October 2022, processing a total of 140 scat samples as part of her study ("Human-conflict and coexistence of black-backed jacked (*Canis mesomelas*) and African Wild Dog (*Lycaon pictus*) in the Okakarara district communal area, Namibia"), which she defended mid-2023.

In collaboration with the Brown Hyaena Project in Lüderitz, carnivore hair samples obtained from rubbing stations and hair snares in southern Namibia were analysed at the genetics laboratory in 2014, to identify the species of the carnivore. This work was part of Sarah Edward's PhD (Royal Holloway, University of London). The genetic analysis was finalised in 2014, and the PhD successfully defended in October 2015.

### Brown hyena

As part of collaboration with Dr Ingrid Wiesel from the Brown Hyena Project in Lüderitz, which started in 2016, we received two sets of paste marks of brown hyenas (*Hyaena brunnea*). This allowed us to optimise protocols to successfully extract DNA from pastemarks. A total of 59 samples were genotyped with published markers. However, variability of the markers in the study population was insufficient, and additional markers are needed. The whole genome of the brown hyaena was mined by a joint collaborator and will allow for the design of additional markers for brown hyaena.

### Caracal

Since 2016, caracal hair and tissue samples, collected from killer traps in South Africa, have been brought to the genetics laboratory to assess relatedness. This study is a collaboration with Kristine Teichman (PhD student from British Columbia University, Canada). Most samples were processed in 2018, and the dataset is expected to be finalised in 2022.

## D.1.2.1 Current Collaborative Non-carnivore Genetics Projects

### Rhinoceros

In the scope of a collaboration with the research centre of Ongava Wildlife Reserve, MSc student Abigail Guerier finalised a pedigree of white rhinoceros (*Ceratotherium simum*) thanks to the inclusion of genetic data. The results have major implications for the management of captive rhinoceros populations and were part of her MSc thesis. A manuscript was published in 2012 ("Parentage analysis in a managed free ranging population of southern white rhinoceros: genetic diversity, pedigrees and management", Guerier et al, 2012). Since 2013 more samples have been collected by the Ongava research team to include additional generations to the project. Abigail Guerier also started a genetics project on black rhinoceros (*Diceros bicornis*) at the CCF genetics laboratory. She continues to visit the laboratory once or twice a year with new batches of samples. Her last visit was at the end of February 2022.

### Elephants

As part of a collaboration with Dr Caitlin O'Connell, the genetics laboratory has received 490 elephant dung samples, of which 203 in 2019,64 in 2023, 30 in 2024. The samples will contribute to two projects for Namibian PhD students Hendrina Joel and Claudine Cloete who are registered with UNAM. Both students were trained at the CCF laboratory in 2023 and will continue to process their samples under the guidance of CCF staff throughout their degree. To date, 246 samples identified as priority have been extracted and genotypes obtained for 12 markers. In October – November 2024, CCF hosted Claudine and Hendrina (also visited in April 2024) for one month.

### Herpetology

As part of a collaboration with Paul Kornacker from the Museum König in Germany on lizard species identification on samples from the NamibRand region of Namibia, 81 samples were extracted in 2017, and species identity was determined for half of the species. A new primer was ordered, which did amplify some of the remaining species. Further research is funding-dependent.

### Termites

In May 2015 and February 2016, a research team from the University of Florida worked with CCF to do a pilot study on termites. The initial tests were successful, and additional markers will be developed by CCF's collaborators. The team has since visited CCF on a regular basis, and more research is planned for upcoming years.

### Bird Sexing

CCF started offering bird sexing as a tool for collaborators studying birds whose sex could not be determined by looking at the birds or chicks. To date, CCF has processed vulture and oxpecker samples for conservation projects as well as UNAM collaborators.

In May 2023, the Genetics laboratory received nine vulture samples from Mark Boorman. The blood samples were extracted, and their analysis was completed in June 2023, a final report has been submitted.

## D.2 Scat Detection Dogs

CCF's scat detection dog unit was put in place to increase the number of cheetah scat samples found in the field. Scat samples are analysed at the CCF genetics laboratory as part of CCF's ongoing conservation efforts to gather valuable information on an animal's gender, individual, and species. Working with scat detection dogs on cheetahs is very challenging, and we calculated a 22 km distance covered for each sample found along a road (data presented in the chapter " Mining black gold - insights from cheetah scat using non-invasive techniques in the field and laboratory: scat-detection dogs, genetic assignment, diet and hormone analyses" of "Cheetahs: Biology and Conservation", 2018).

The test phase of the programme started with the arrival of Border Collie, Finn, in February 2009. Since 2009 the programme has evolved continuously, and has trained and/or hosted several scat detection dogs, including Tiger, a Springer spaniel who was CCF's main detection dog from 2012 to 2017, donated by Australian dog trainer Steve Austin. Since 2020, the detection dog team has been routinely deployed to other parts of the country and is contributing valuable samples to the genetic research at CCF, as well as providing information for human-wildlife conflict resolution and ecology.

CCF's core detection dog team consists of dog trainer Tim Hofmann and CCF's two Belgian Malinoises Enyakwa and Gamena. Tim joined CCF in 2018 as a scat dog researcher and started his PhD 'Evaluation and application of scat detection dogs to study elusive carnivores in Southern Africa' in May 2021. Eveline Iikondja joined the scat detection dog program as Canine Officer for the year 2024.

Since the beginning of the year, Eveline has been training alongside Gamena to form the second dog team at CCF; she became a certified conservation dog handler through K9 Conservationists in June of 2024. Gamena and Eveline were a great addition to the team for the year 2024.

*Figure 4: Canine Officer Eveline Iikondja with detection dog Gamina*

Scent line-up exercises, implemented in 2020, to evaluate the dog's precision, are no longer performed systematically but are performed as part of our regular training routine. Here different scents are hidden in 4 metal boxes ('sniffer boxes') that are organised in a line which the dogs have to walk up and down. Once they reach the box containing the target scent, they are supposed to show their trained indication behaviour which is sitting. These line-ups are very helpful to monitor the dogs' precision and sensitivity. Precision is the proportion of correctly indicated target scat samples to falsely indicated negative samples. Sensitivity is the proportion

of correctly indicated target samples to the total number of target samples available. Data from training transects performed since 2020, to document the team's development, is currently analysed as part of Tim's PhD project. Here target and non-target scats are hidden along road transects in different habitats to mimic real search conditions. The assessment transects allow for a precise 'real time' evaluation of the team throughout the year.

In 2024, the dogs walked a total of 102.7 km of transects on CCF land for training exercises and opportunistic sample collections. A total of 29 potential cheetah scat samples were found by Enya and Gamena, and the team discovered two new playtrees on the CCF farms Bellebenno and Otjenga that will now be part of CCF's regular playtree monitoring. The team also found 30 potential cheetah samples off-site, to contribute to the Namibia-wide cheetah scat surveys: Eveline and Gamena conducted a trip to the Gobabis region in December of 2024. The team visited four farms and successfully located three playtrees on three different farms. Additionally, they discovered cheetah spoor from one adult and two cubs, along with a very fresh cheetah scat.

The combined ecology/scat detection sampling scheme was applied to a fifth area in Namibia, the N#a-Jaqna conservancy. This area is situated between CCF's long-term supported communal conservancies in the Greater Waterberg Landscape and the 2022 study area in Ondjou in the central eastern landscape. Scats, predator marking sites, and other signs of carnivore presence are sought by our team through walking transects. The team walked a total of 49.5 km of transects, during which we found 59 carnivore scat samples, including six fresh African wild dog scats, along with tracks indicating the presence of approximately eight adult dogs. We also conducted 266 km of vehicular searches to locate playtrees and other marking sites more rapidly than while walking, and found 5 marking sites and an additional 14 carnivore scat samples. Most samples were identified as brown or spotted hyena, leopard, and African wild dog.

Another collaborative project, funded by the UK Darwin Initiative, was launched this year, focusing on applying multiple survey techniques to assess the extent of human-wildlife conflict and explore potential solutions in the East and West of Namibia. As part of this project, we searched for scats of medium to large carnivores with the aim to determine real human-wildlife conflict levels based on the diet identified from scat. Eveline, Gamena, and Tim surveyed the eastern area, which spans six communal conservancies and covers 8,154 km$^2$, collecting 134 scats from six different species, including 22 cheetah scats from multiple marking sites based on field identification. This was particularly interesting as the scat detection dog team had never worked in such an arid environment in Namibia's west. Eveline and Gamena then traveled to the eastern area, where they sampled two conservancies covering a total of 9,842 km$^2$. Here, the team collected 138 scats from three different species based on field identification.

In addition, the scat dog team has been travelling to Angola 1-3 times a year since 2018, as part of a collaboration involving long-term CCF collaborator Dr. Ezequiel Fabiano and CIBIO (Centro de Investigação em Biodiversidade e Recursos Genéticos) from the University of Porto in Portugal. In the scope of this collaboration, the scat dog team conducts 3-week surveys in Bicuar National Park and Cuatir Conservation Area to find predator scat. Currently trips are limited to once a year and conducted toward the end of the dry season, to maximize accumulation of scat samples. This year was unique because the release of potentially habituated lions and elephants shortly before our field season prevented us from working in

Cuatir and ultimately led to the decision to work without Enya in Bicuar. The effectiveness, safety and need of future trips is currently being evaluated.

In 2024 the team was very active to promote the scat detection dog program and connect to other research on various conferences. Tim presented our work online at the 4th International Meeting on Zoo Research, Conservation and Biodiversity hosted by Serengeti-Park Hodenhagen and at the 4th Working Conference of the Wildlife Detection Dogs e.V. (WDD) in Kleinlüder, Germany. Eveline presented at the conference of the Southern African Wildlife Management Association (SAWMA) in Windhoek.

# E. Large Carnivore Research and Ecology

## E.1 Cheetah Release and Monitoring

### E.1.1 Hella & her three youngsters (AJU 1785, 2159, 2160, 2161)

Since her release at the beginning of December 2023, Hella and her three youngsters have been roaming in Erindi Private Game Reserve (Figure 1). Her three youngsters are now almost two years old and have been fitted with GPS collars at the beginning of March 2024 to anticipate their dispersal.

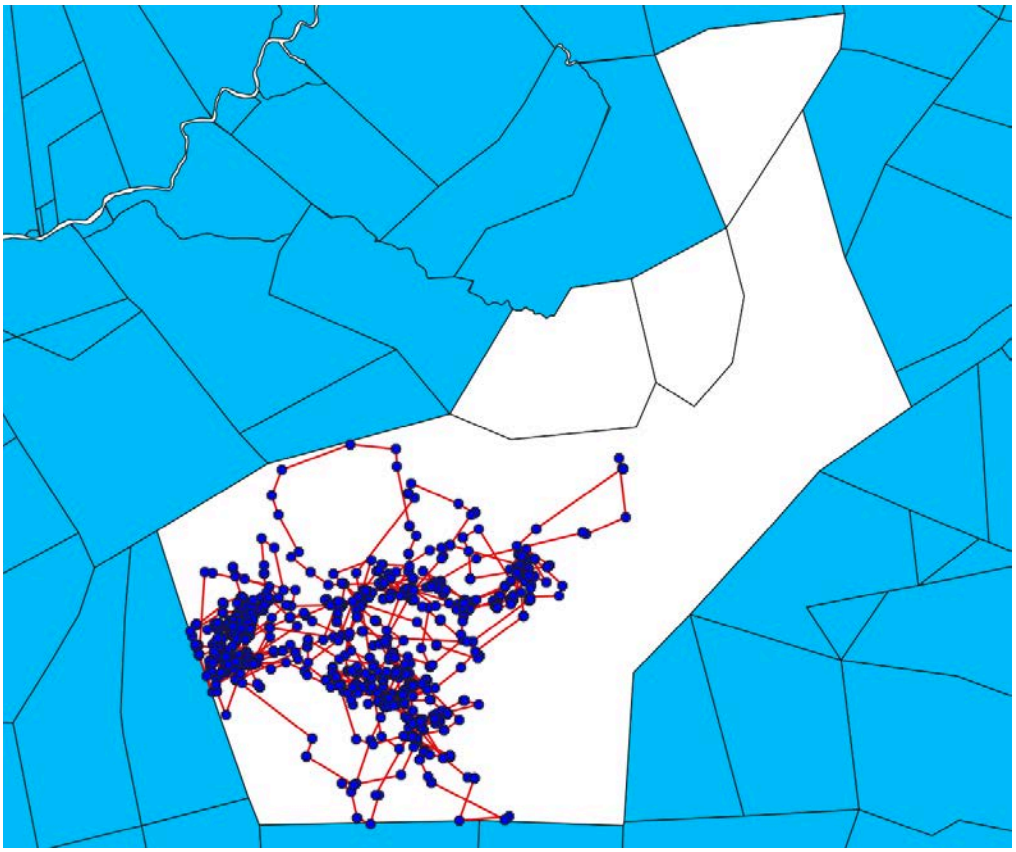
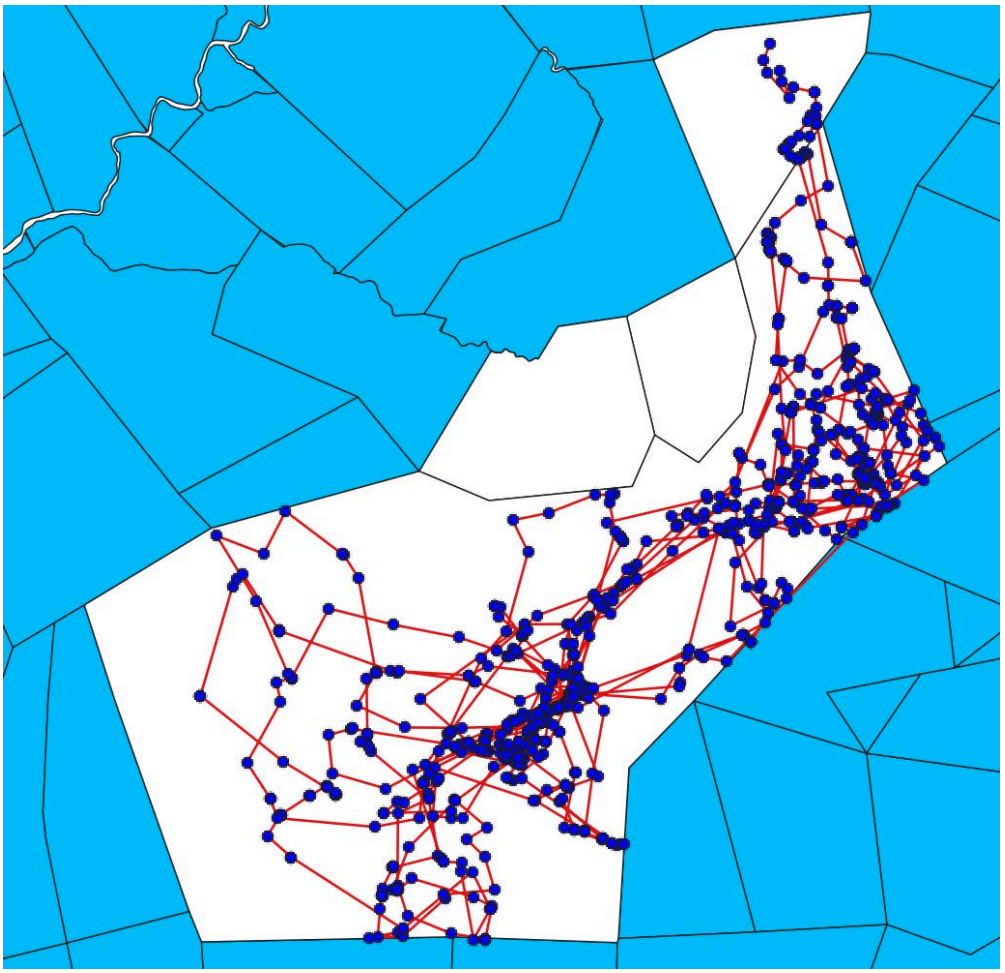


*Figure 5: Hella's movement from the 1st January 2024 until the end of June 2024*

## E.1.2 Four Boys (AJU 1898, 1779, 1780 & 1786)

More than two years after their release, Max, West, Thor and Ben are doing great on Erindi Game Reserve (Figure 2). Thor and West were slightly injured at the beginning of January 2024 but appeared to have recovered well. They both recovered fully from their limp and all four boys are still together on Erindi Private Game Reserve.

*Figure 6 : Four boys '*



*movements from the 1st January 2024 until the end of June 2024.*

## E.1.3 Atlanta (AJU 2103)

Almost three years after splitting from his sister Tbilisi, Atlanta remains on Erindi Private Game Reserve. He has been seen from time to time by Erindi staff and managed to look after himself. He is doing good on his own.

## E.1.4Josh & Kabaka (AJU 2016, 2061)

Josh and Kabaka are two unrelated males that came to CCF as orphaned cubs and were introduced together at Erindi Private Game Reserve where they were released at the end of April 2024. So far, they have been exploring and trying to adapt to their new environment (Figure 3). They started to show interest in hunting but still need time to improve their skills. CCF and Erindi staff are working together to monitor them.

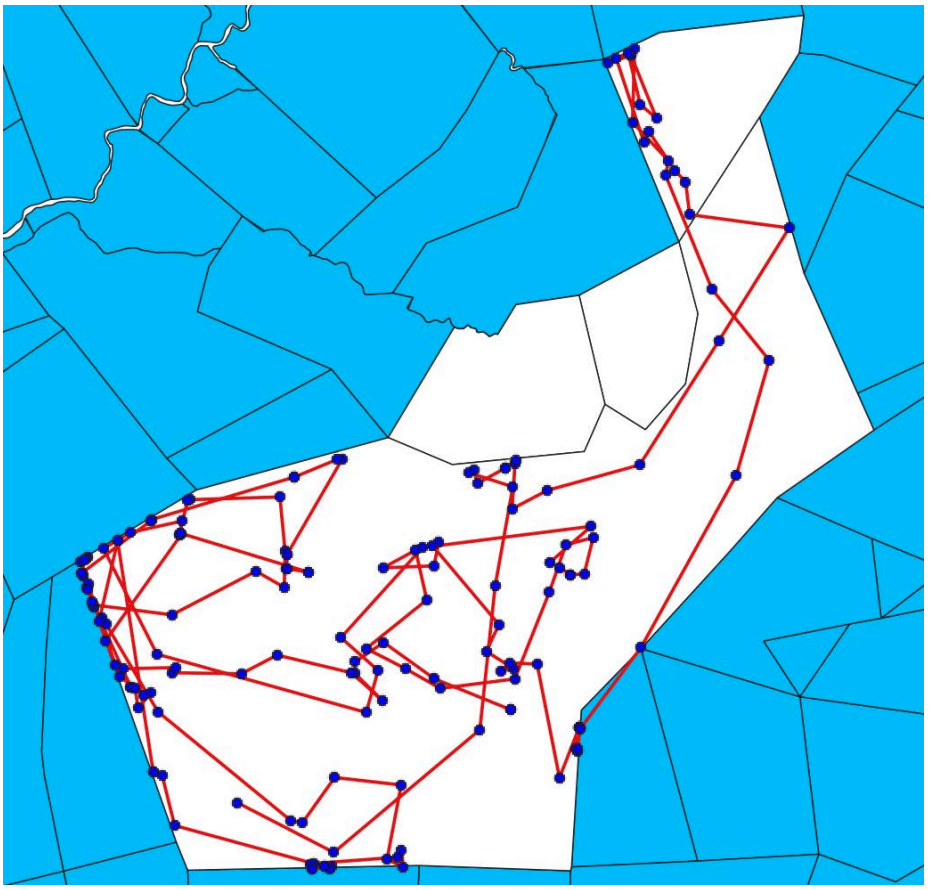


*Figure 7: Josh and Kabaka 's movement from the 23rd April 2024 until the end of June 2024.*

### E.1.5 Janus and his sibling (AJU 2164, 2197)

In mid-October 2023, Janus was captured on the same farm with another male, probably his sibling. Unfortunately, permission from the landowner was not secured to release them so it was decided to take them to the CCF veterinary clinic for a complete checkup and to release them on CCF's land. They killed an adult kudu bull less than 48 hours after release and left CCF land the day after. Janus's sibling collar failed and sends data infrequently, but Janus' collar is still active. They have been moving south from CCF and seem to have established a home range in the Omatako Mountain area. Unfortunately, at the beginning of June, Janus was shot. Since that time, his brother has been moving North (Figure 4).

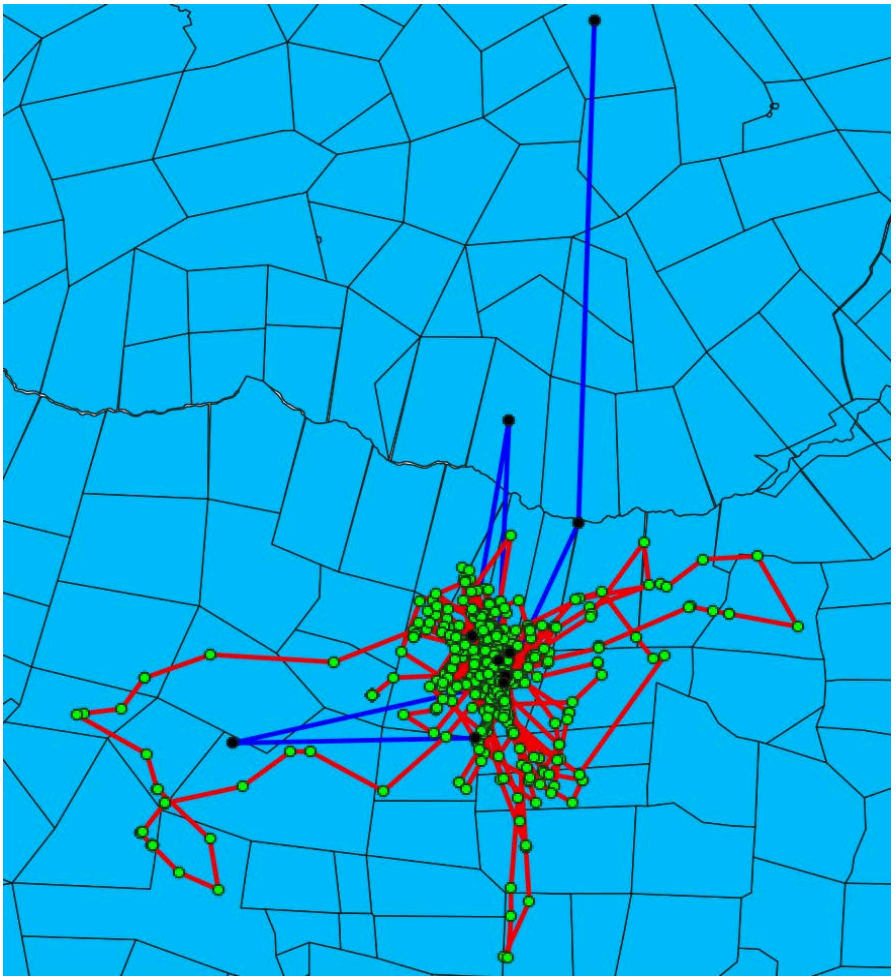


*Figure 8: In red, Janus and his brother's movements from the 1st January 2024 until the beginning of June 2024. In blue Janus's brother movement since Janus's death at the beginning of June until end of June 2024*

## E.1.6 Scarlett (AJU 2195)

The CCF East team picked up an adult female cheetah caught in a trap cage on a farm in Gobabis area on 31 May 2023. She was trapped after a human-wildlife conflict incident where she caught and fed on a goat. Due to severe injuries and in conjunction with MEFT Gobabis, it was decided the cheetah will be brought to CCF for treatment and then release. In early September 2023, the CCF veterinarians deemed the female cheetah was ready for release and Scarlett was taken back to Gobabis where she was released on a farm part of the Early Warning System (Figure 5). Unfortunately, Scarlett was found dead in Gobabis area at the end of April 2024. No clear conclusion could be reached on the cause of death of the female cheetah. However, the fact that there were no prey remains in the stomach and the condition of the teeth, as well as her estimated age, suggests the cheetah may have struggled to kill and consume sufficient prey to maintain life.

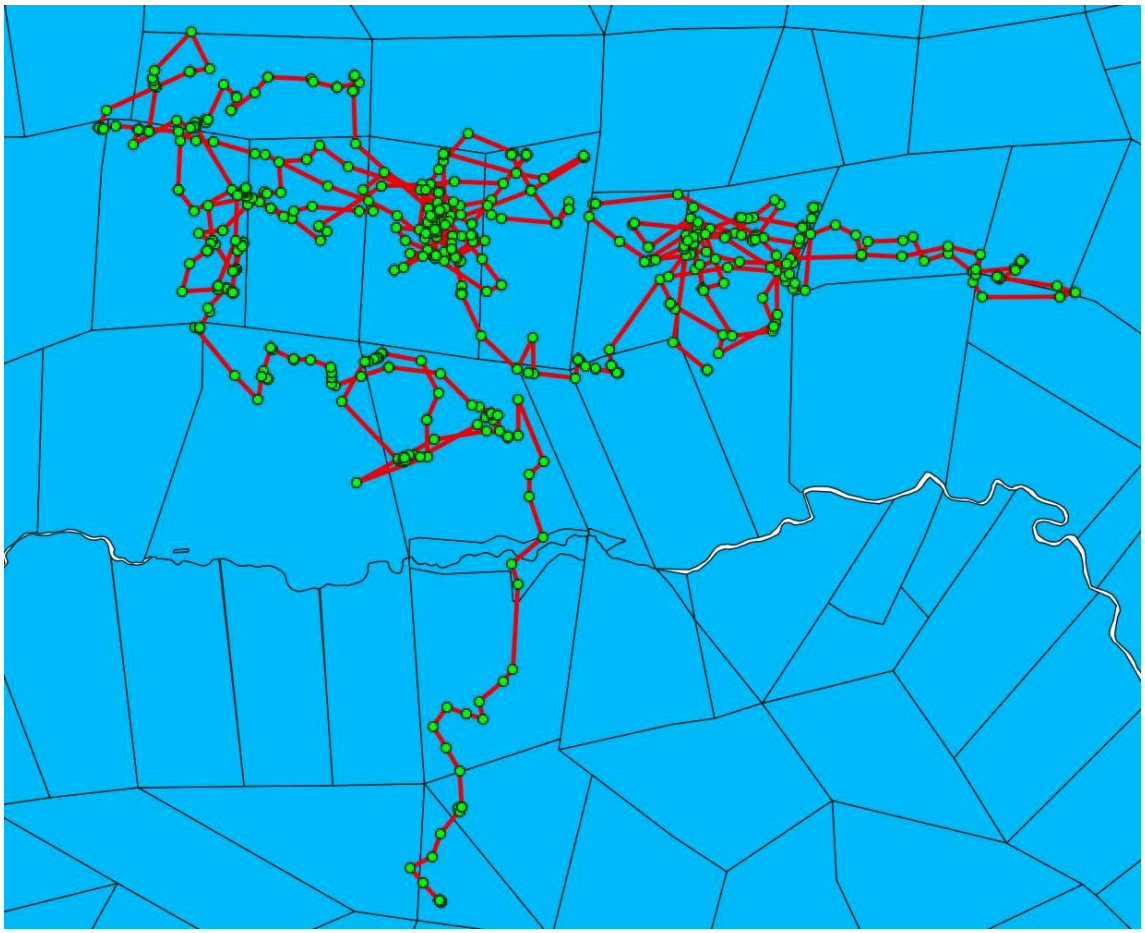


*Figure 9: Scarlett 's movement from the 1st January 2024 until the end of April 2024.*

### E.1.7 Lily (AJU 2198)

On 28 November 2023, permission from MEFT Gobabis was granted for the CCF East team, to pick up a female cheetah caught in a trap cage on a farm in Gobabis area. After a veterinary check-up to confirm the female cheetah was in good condition and was fitted with a GPS collar, Lily was taken to a farm part of the EWS program in Gobabis area to release her back into the wild (Figure 6). In mid-April 2024, Lily's GPS collar showed clustering in the same area which indicated that she was denning (Figure 7). We couldn't get a visual on the cubs to know how many they are. She is still in the same area since, which leads us to believe that the cubs are still alive.

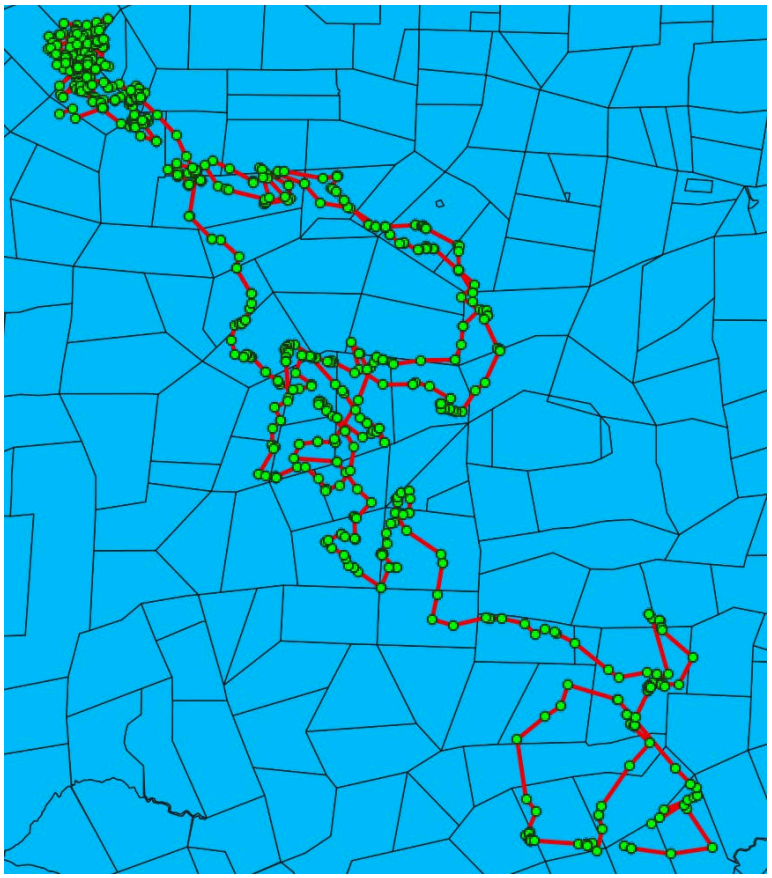


*Figure 10: Lily's movement from the 1st of January 2024 until the end of June 2024.*

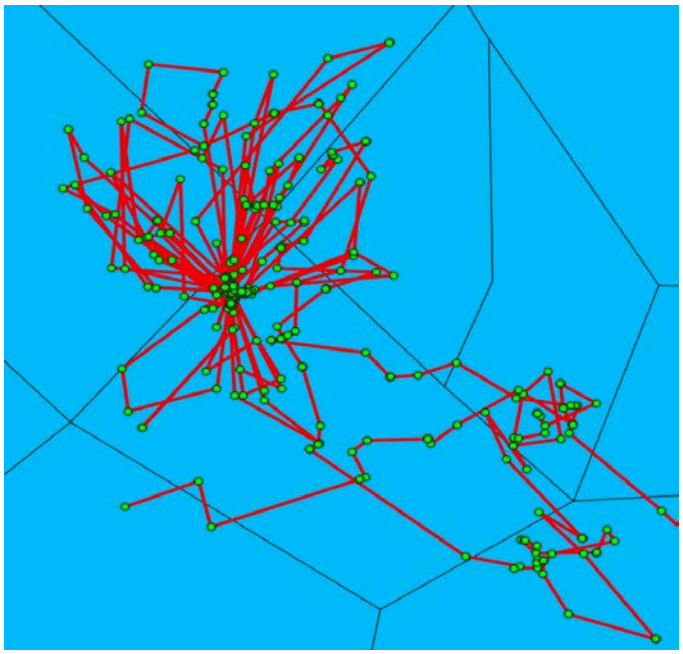


*Figure 11: Lily's den site*

### E.1.8 CCF Females (AJU 2200, 2201)

On the 27th February 2024, three cheetahs, one male and two females were released on CCF land in agreement with MEFT. Those three cheetahs were caught in the Gobabis area all together. They were suspected to be siblings in early dispersal according to their size. However, on the release day, the females separated from the male. After spending a couple of months roaming on CCF land they started moving North from CCF land (Figure 11). The two females are still together and are doing well.

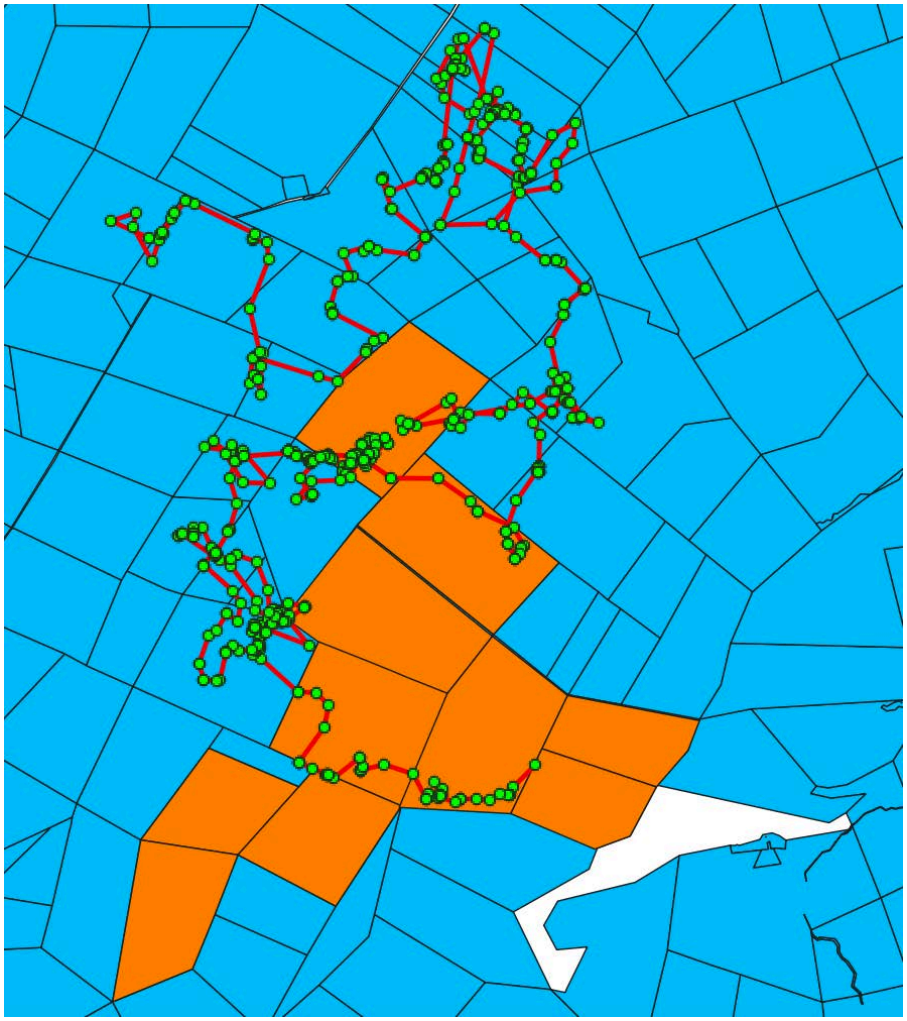


*Figure 12: CCF Females' movement from 27th February 2024 until the end of June 2024. In orange, CCF land.*

## E.1.9. CCF Male (AJU 2199)

On the 27th February 2024, three cheetahs, one male and two females were released on CCF land in agreement with MEFT. Those three cheetahs were caught in the Gobabis area all together. They were suspected to be siblings in early dispersal according to their size. However, on the release day, the females separated from the male. The male was found on a kudu calf the day after his release and is still currently on CCF land, doing great (Figure 12).

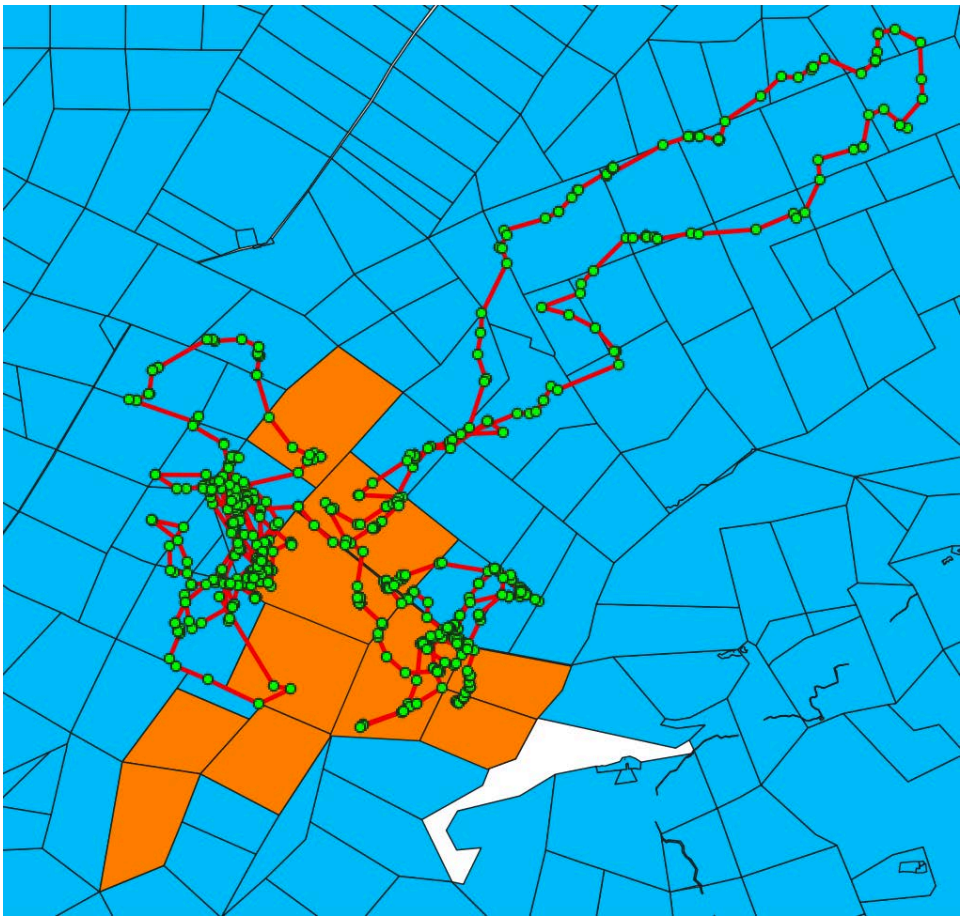


*Figure 13: CCF Male 's movement from 27th February 2024 until the end of June 2024. In orange, CCF land.*

# F. Ecosystem Research

Over 80% of Namibia's wildlife lives on farmland. CCF's core ongoing study on farms it manages includes an assessment of woodland savannah ecology for long-term viability of cheetahs and their prey.

## F. 1 Weather Monitoring

CCF staff continued to collect rainfall data at the CCF centre and farms and daily high and low temperature reading at the CCF centre throughout 2024 (Figures i and ii). Between January and December 2024, CCF received 378.59 mm total amount of rainfall which is more than the amount of rainfall received in 2023 (Figure 1). The first rainfall in summer was

recorded on 7 November 2024 (3.5 mm) and the highest amount of rainfall was recorded on 6 April 2024 (25.5 mm) (Figure 2).

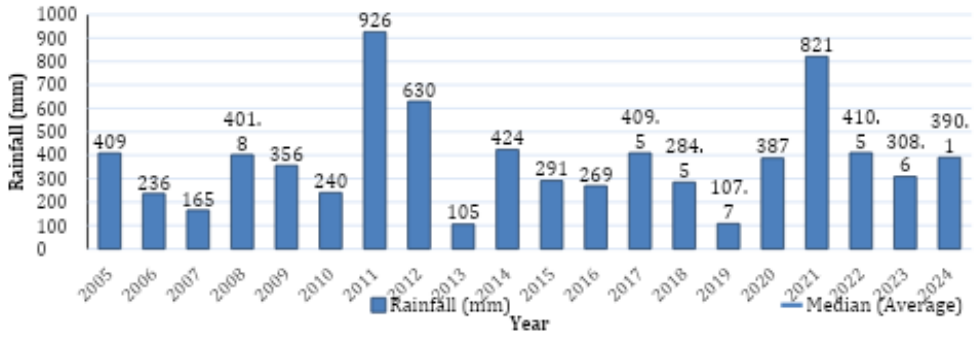



*Figure 14: Annual seasonal rainfall from 2005-2024. The orange line bar indicates the median of the 20 years (378.59 mm).*

The lowest temperature during this report period was recorded on June 3 and 8 at 3 °C, and the highest temperature was recorded on February 16 and 19 at 39 °C. Monthly average temperatures were overall comparable between 2023 and 2024 (Figure ii).


*Figure 15: Monthly average minimum and maximum temperature (°C) for 2023 and 2024.*

## F.2 Game Monitoring

### F.2.1 Big Field Game Counts

CCF's Big Field, also known as 'The Little Serengeti', is an old uncultivated field of 14.9 km$^2$. The field, one of the largest open, uncultivated areas in the north central farmlands, attracts a high number of free-ranging games. This area provides an ideal case study to monitor ecological successional trends. Apart from containing high prey densities for cheetahs and leopards, this area contains the most game, so monitoring trends and understanding the

dynamics of how the game utilizes the field provides important information for future management strategies and is very helpful for tourism in the long term. For this reason, CCF has been conducting monthly counts since 2004. The field habitat has changed over the years and continues to show a high density of Bitter bush (*Pechuel-loeschea leubuitziae*), which has triggered a change in species density on the field.

During the 2024 reporting period, a total of 108 replicate counts (3 routes each sampled daily for 3 consecutive days over 6 months) were conducted on the Big Field, resulting in a sampling effort covering 296.64 km. There are three routes on the field: Chewbaaka Road (6.34 km), Midfield Road (5.38 km), and Osonanga Road (4.76 km) (Figure 3). The total distance travelled by three teams is 16.48km per day and 49.44km per month.

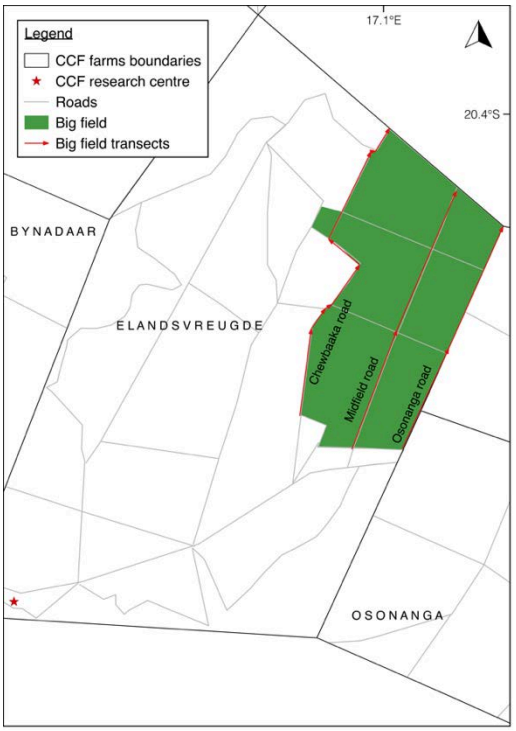



*Figure 16: Map of CCF land and location of the Big Field showing the three transects driven monthly for game counts.*

All data from these surveys were entered into the main database (FileMaker Pro 18) and preliminary results on trends were produced. Density estimates for the most common species (representing more than 10% of sightings) are reported in (**Table 1**). Densities were estimated using Distance 7.2 Software in the R package. The current period was compared to the same period in 2023, showing an overall decrease for most species' densities. There was an overall decrease in the sightings of most common species except for red hartebeest and warthog (Figure 14).

***Table 5:*** *Density estimates (individual/km2) with 95% confidence interval of the most common species seen on Big Field in 2023 and 2024 (Jan-Dec).*

| | 2023 | | | 2024 | | |
|---|---|---|---|---|---|---|
| **Species** | **Mean** | **Lower CI** | **Upper CI** | **Mean** | **Lower CI** | **Upper CI** |
| Warthog (*Phacochoerus africanus*) | 2.32 | 0.74 | 7.26 | 0.67 | 0.46 | 0.96 |
| Springbok (*Antidorcas marsupialis*) | 1.07 | 0.84 | 1.36 | 0.14 | 0.10 | 0.20 |
| Red hartebeest (*Alcelaphus buselaphus caama*) | 0.12 | 0.06 | 0.23 | 0.15 | 0.08 | 0.28 |
| Oryx (*Oryx gazella*) | 3.27 | 0.17 | 62.78 | 0.42 | 0.27 | 0.65 |
| Eland (*Taurotragus oryx*) | 0.70 | 0.31 | 1.60 | 0.11 | 0.00 | 14.65 |
| Kudu (*Tragelaphus strepsiceros*) | 1.20 | 0.37 | 3.87 | 0.12 | 0.04 | 0.37 |

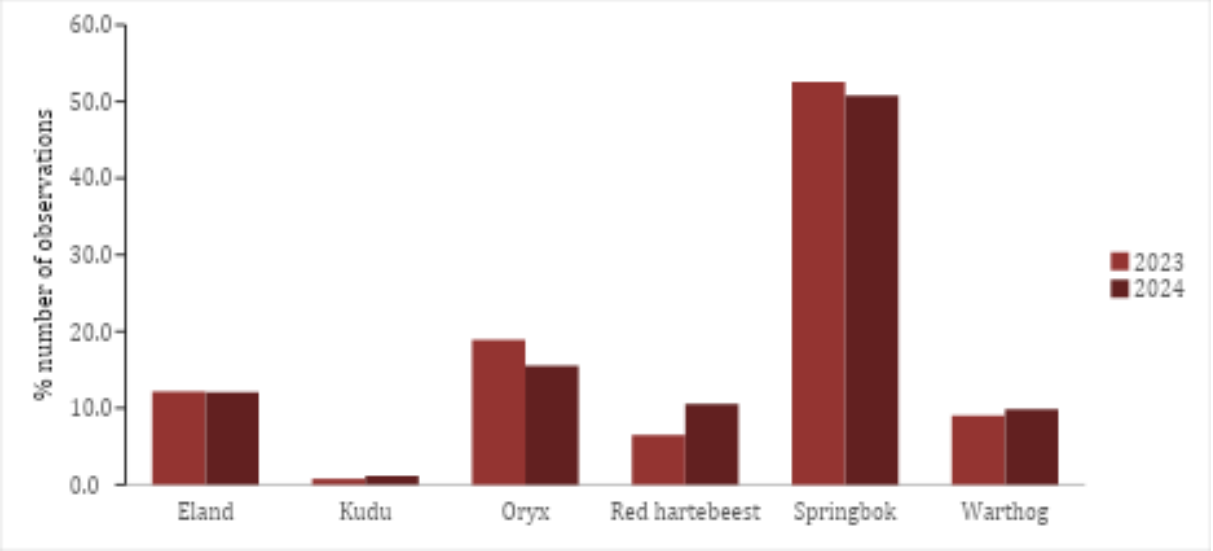



*Figure 17: Frequency of sightings for the most common species during the Big Field counts in 2023 and 2024 (January – Dec).*

## F.2.2 Night counts - Circuit B

The night count (Circuit B) has been discontinued since 2023. The count was also driven once a month (7 pm – 10 pm in winter, and 8 pm – 11 pm in summer) utilizing spotlights on both sides of the vehicle (Figure 5)10 pm in winter, and 8 pm – 11 pm in summer). The night count focused on nocturnal species.

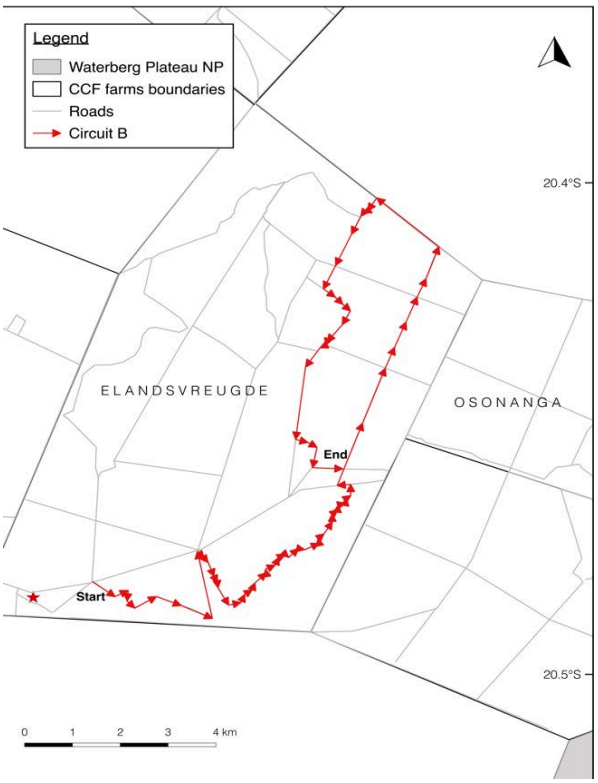



*Figure 18: Location of Circuit B transect on farm Elandsvreugde.*

## F.2.3 Annual Waterhole Counts

During CCF's annual waterhole count on August 4, 2024, a total of 29 natural and man-made water holes were observed over a 12-hour period (6:00 am - 18:00 pm). Of those 29 water points, 12 were observed through direct observation and 16 were observed through indirect observation via camera traps (Figure 6). At each water point where direct observations occurred, interns, volunteers, and staff were stationed in hides to record any wildlife sightings. The images from the camera traps were manually sorted to record each animal observed. The data recorded for each direct and indirect observation included the species name, number of individuals for each sex and age class, the total number of animal(s) spotted, direction the animal(s) arrived/left, the time the animal(s) arrived/left, and whether or not the animal(s) drank from the water or utilized the salt lick provided.

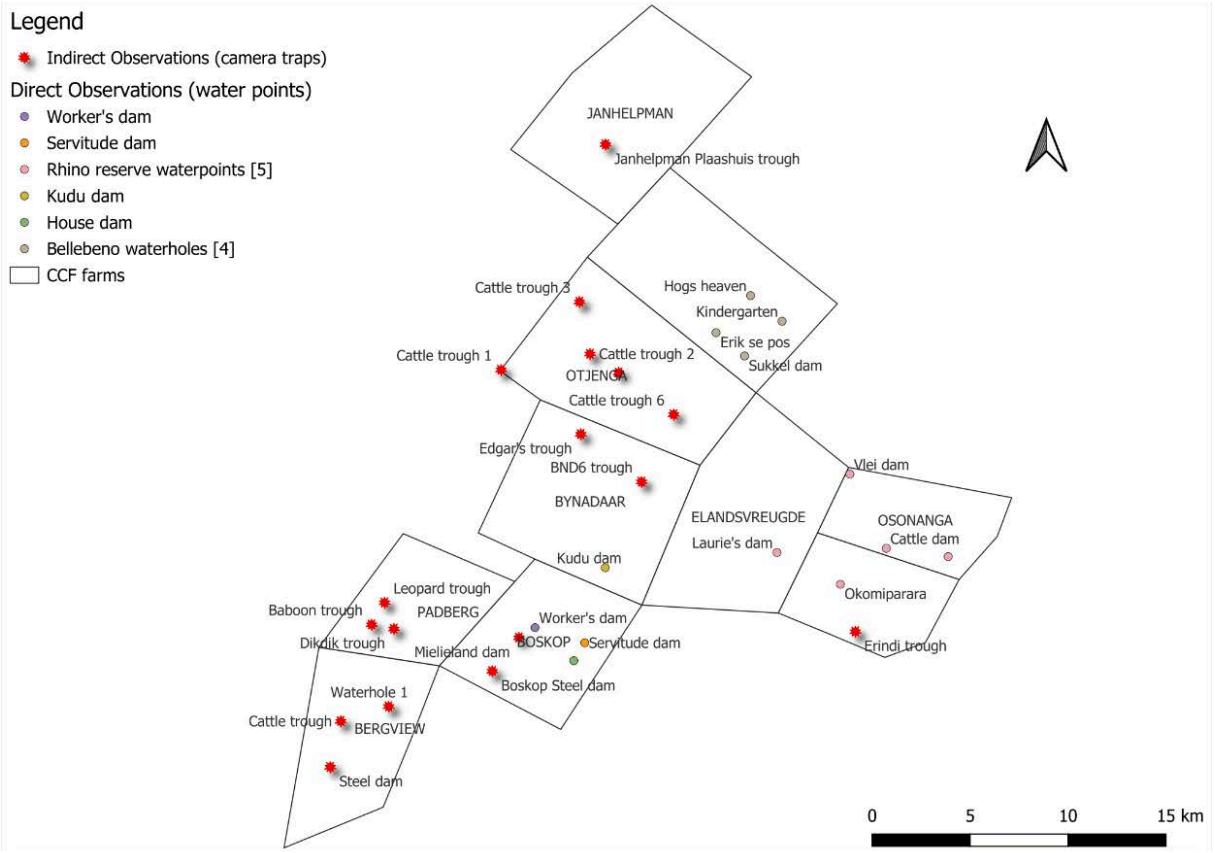



*Figure 19: Locations of the water points on CCF's farms surveyed by direct and indirect observation.*

The species richness varied widely throughout the farms. Osonanga had the highest species richness with 16 species observed from direct observations (Table 6). Bellebenno had the second-highest species richness with 10 species detected from direct observations. Boskop and Otjenga had the third highest species richness. Boskop had 8 species detected from direct observations and 6 species from indirect observations. Otjenga had 8 species detected from indirect observations. Bynadaar and Padberg both had 5 species from both indirect and direct observations. Cheetah View and Janhelpman had the lowest species richness. Cheetah view had 4 species from indirect observations and Janhelpman only had 1 species from indirect observations.

*Table 6: Species richness of each farm during the annual water hole count.*

| | Reserve Farms | | Livestock Farms | | | |
|---|---|---|---|---|---|---|
| **Species** | **Bellebenno** | **Osonanga** | **Bynadaar** | **Boskop** | **Padberg** | **Total** |
| **Mammals** | | | | | | |
| Banded Mongoose *(Mungos mungo)* | - | 13 | - | - | - | 13 |
| Black Backed Jackal (*Canis mesomelas*) | 2 | 1 | 3 | - | - | 6 |
| Brown Hyena *(Hyaena brunnea)* | - | 1 | - | - | - | 1 |
| Chacma Baboon (*Papio ursinus*) | 61 | 73 | - | - | - | 134 |
| Common Duiker (*Sylvicapra grimmia*) | 17 | 39 | 12 | 15 | 37 | 120 |
| Common Warthog (*Phacochoerus africanus*) | 63 | 180 | 23 | 7 | 23 | 296 |
| Damara Dik-Dik *(Madoqua kirkii)* | - | - | - | 5 | - | 5 |
| Eland (*Taurotragus oryx*) | 92 | 27 | - | - | - | 119 |
| Gemsbok/Oryx (*Oryx gazelle*) | 6 | 26 | - | 3 | 1 | 36 |
| Giraffe (*Giraffa cameleopardalis*) | 2 | 6 | - | - | - | 8 |
| Greater Kudu (*Tragelaphus strepsiceros*) | 3 | 49 | 25 | - | 10 | 87 |
| Impala (*Aepyceros melampus*) | - | - | - | 23 | - | 23 |
| Plain Zebra (*Equus quagga*) | 14 | - | - | - | - | 14 |
| Red Hartebeest *(Alcelaphus buselaphus caama)* | - | 49 | - | - | - | 49 |
| Slender Mongoose (*Galerella sanguinea*) | - | 5 | - | - | - | 5 |
| Springbok (*Antidorcas marsupialis*) | - | 4 | - | 19 | - | 23 |
| Steenbok (*Raphicerus campestris*) | 5 | 8 | 7 | 19 | 3 | 42 |
| **Large Birds** | | | | | | |
| Ostrich (*Struthio camelus*) | - | 1 | - | - | - | 1 |
| White-Backed Vulture (*Gyps africanus*) | - | 1 | - | 3 | - | 4 |
| **Total** | 265 | 483 | 70 | 94 | 74 | 986 |

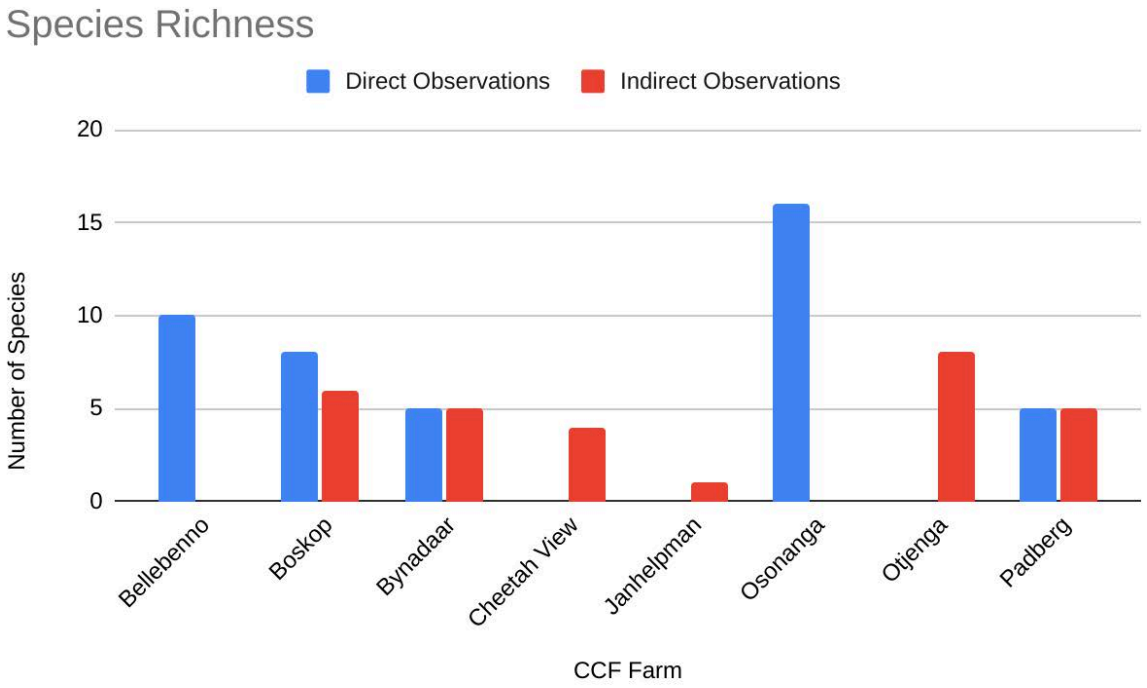



*Figure 20: Species richness of each farm during the annual water hole count. Direct observations (visual sightings) and indirect observations (camera traps) are illustrated.*

From the direct observations, observers counted a total of 986 individuals from 19 different species (Table 2). Of these species, 17 were mammals and 2 were large birds. The most abundant species found from direct observations was the Common Warthog (296) followed by the Chacma Baboon (134) and the Common Duiker (120). The least abundant species were the Brown Hyena (1), Ostrich (1), and White-Backed Vulture (4). The total number of individuals spotted during the direct observations was much higher on the reserve farms compared to the livestock farms. For instance, Osonanga had a total of 483 individuals and Bellebenno had 265 whereas Boskop had 94, Padberg had 74, and Bynadaar had 70.

*Table 7: Frequency of species observed and recorded at each farm during the direct observation (visual sighting) annual count in 2024.*

| | Reserve Farms | | Livestock Farms | | | |
|---|---|---|---|---|---|---|
| **Species** | **Bellebenno** | **Osonanga** | **Bynadaar** | **Boskop** | **Padberg** | **Total** |
| **Mammals** | | | | | | |
| Banded Mongoose *(Mungos mungo)* | - | 13 | - | - | - | 13 |
| Black Backed Jackal (*Canis mesomelas*) | 2 | 1 | 3 | - | - | 6 |
| Brown Hyena *(Hyaena brunnea)* | - | 1 | - | - | - | 1 |
| Chacma Baboon (*Papio ursinus*) | 61 | 73 | - | - | - | 134 |
| Common Duiker (*Sylvicapra grimmia*) | 17 | 39 | 12 | 15 | 37 | 120 |

| | | | | | | |
|---|---|---|---|---|---|---|
| Common Warthog (*Phacochoerus africanus*) | 63 | 180 | 23 | 7 | 23 | 296 |
| Damara Dik-Dik *(Madoqua kirkii)* | - | - | - | 5 | - | 5 |
| Eland (*Taurotragus oryx*) | 92 | 27 | - | - | - | 119 |
| Gemsbok/Oryx (*Oryx gazelle*) | 6 | 26 | - | 3 | 1 | 36 |
| Giraffe (*Giraffa cameleopardalis*) | 2 | 6 | - | - | - | 8 |
| Greater Kudu (*Tragelaphus strepsiceros*) | 3 | 49 | 25 | - | 10 | 87 |
| Impala (*Aepyceros melampus*) | - | - | - | 23 | - | 23 |
| Plain Zebra (*Equus quagga*) | 14 | - | - | - | - | 14 |
| Red Hartebeest *(Alcelaphus buselaphus caama)* | - | 49 | - | - | - | 49 |
| Slender Mongoose (*Galerella sanguinea*) | - | 5 | - | - | - | 5 |
| Springbok (*Antidorcas marsupialis*) | - | 4 | - | 19 | - | 23 |
| Steenbok (*Raphicerus campestris*) | 5 | 8 | 7 | 19 | 3 | 42 |
| **Large Birds** | | | | | | |
| Ostrich (*Struthio camelus*) | - | 1 | - | - | - | 1 |
| White-Backed Vulture (*Gyps africanus*) | - | 1 | - | 3 | - | 4 |
| **Total** | 265 | 483 | 70 | 94 | 74 | 986 |

There were a total of 257 individuals counted from the indirect observations from 10 different species, all of which were mammals (Table 3). The species that were found in the direct observations that were not found in the indirect observations include the Banded Mongoose, Brown Hyena, Chacma Baboon, Damara Dik-Dik, Plain Zebra, Slender Mongoose, Springbok, Ostrich, and White-Backed Vulture. The most abundant species were the Common Warthog (78) followed by the Greater Kudu (58) and the Common Duiker (55). The least abundant species were the Black Backed Jackal (5), Steenbok (5), and Eland (4). Although most of the indirect observations were conducted on livestock farms, the total number of individuals spotted was higher on the livestock farms. For instance, Otjenga had a total of 92 individuals whereas Janhelpman only had 4. Unfortunately, no data was collected in the reserve since the camera trap had a malfunctioning SD card.

*Table 8: Frequency of species observed and recorded at each farm during the indirect observation (camera trap) annual count in 2024.*

| Species | Livestock Farms | | | | | | |
|---|---|---|---|---|---|---|---|
| | Janhelpman | Bynadaar | Otjenga | Boskop | Padberg | Cheetah View | Total |
| **Mammals** | | | | | | | |
| Banded Mongoose (Mungos mungo) | - | - | - | - | - | - | - |
| Black Backed Jackal *(Canis mesomelas)* | - | 1 | 3 | - | 1 | - | 5 |
| Brown Hyena *(Hyaena brunnea)* | - | - | - | - | - | - | - |
| Chacma Baboon *(Papio ursinus)* | - | - | - | - | - | - | - |
| Common Duiker *(Sylvicapra grimmia)* | - | 4 | 9 | 3 | 19 | 20 | 55 |
| Common Warthog *(Phacochoerus africanus)* | 4 | 2 | 25 | 9 | 7 | 31 | 78 |
| Damara Dik-Dik *(Madoqua kirkii)* | - | - | - | - | - | - | - |
| Eland *(Taurotragus oryx)* | - | - | 4 | - | - | - | 4 |
| Gemsbok/Oryx *(Oryx gazelle)* | - | 5 | 8 | 2 | 7 | - | 22 |
| Giraffe *(Giraffa cameleopardalis)* | - | 2 | 4 | - | - | - | 6 |
| Greater Kudu *(Tragelaphus strepsiceros)* | - | - | 35 | 5 | 10 | 8 | 58 |
| Impala *(Aepyceros melampus)* | - | - | - | 18 | - | - | 18 |
| Plain Zebra *(Equus quagga)* | - | - | - | - | - | - | - |
| Red Hartebeest *(Alcelaphus buselaphus caama)* | - | - | - | 6 | - | - | 6 |
| Slender Mongoose *(Galerella sanguinea)* | - | - | - | - | - | - | - |
| Springbok *(Antidorcas marsupialis)* | - | - | - | - | - | - | - |
| Steenbok *(Raphicerus campestris)* | - | - | 4 | - | - | 1 | 5 |
| **Large Birds** | | | | | | | |
| Ostrich *(Struthio camelus)* | - | - | - | - | - | - | - |
| White-Backed Vulture *(Gyps africanus)* | - | - | - | - | - | - | - |
| **Total** | 4 | 14 | 92 | 43 | 44 | 60 | 257 |

## F 2.4 Seasonal Count across CCF farms

Starting in July 2017, CCF began conducting seasonal, rather than only annual, strip counts across all CCF farms. These seasonal counts follow transects used in the past for annual counts with added routes to cover Osonanga, Janhelpman, and the non-game fenced section of Bellebenno, Padberg and Otjenga (Figure 8). They are repeated twice (one morning and one-afternoon count) for each season (hot, wet, cold dry and hot dry). The 11 transects cover a total of ~213 km (426 km including the repetitions). Densities were estimated for the most commonly seen species following the same methods as for Big Field counts.

Densities for the most frequently sighted species were calculated using the 'Distance Sampling in R' package using R Studio.

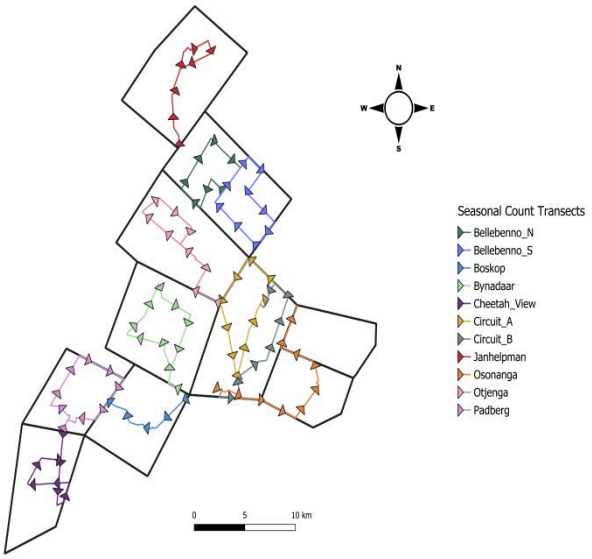



*Figure 21: Map of seasonal strip count transects on CCF land.*

Most of the species are distributed across CCF land except for impala and plain zebra. Impalas are largely restricted to Cheetah View and Boskop while zebras are only found in the game-fenced portion of Bellebenno, Padberg, and Boskop. The overall densities of all species, except red hartebeest were lower in 2024 compared to 2023. Compared to other seasons in 2024, there was a slight increase in the abundance of some species in the hot wet season. During the seasonal counts of 2024, the densities of oryx, warthog, duiker and steenbok were the highest (Table 2). This could be because these three species are found around most of the CCF farms (sightings: oryx 58.5%, warthog 66.2%, duiker 70.8% and steenbok 98.5% of the 11 transects). The densities of giraffe, springbok and red hartebeest were the lowest. There was a noticeable decrease in the abundance of most species in the hot wet season compared to the same period in 2023. This may be because of food and water availability from poor rainfall, resulting in reduced reproduction and survival rates of the animals. Overall, there appears to be a decline in ungulate densities.

*Table 9: Density estimates of main species counted during seasonal strip counts, during the wet season of 2023 and 2024. Cells marked with * had fewer observations to run the Distance analysis.*

| Density estimate (individual/km²) | | | | | | |
|---|---|---|---|---|---|---|
| | 2023 | | | 2024 | | |
| **Species** | **Hot Wet** | **Cold Dry** | **Hot Dry** | **Hot Wet** | **Cold Dry** | **Hot Dry** |
| Common Duiker (*Sylvicapra grimmia*) | 0.92 (0.41-2.08) | 7.55 (4.06-14.06) | 8.05 (3.24-19.98) | 0.50 (0.20-1.30) | 0.96 (0.37-2.44) | 0.13 (0.07-0.24) |
| Eland (*Taurotragus oryx*) | * * | 0.64 (0.16-2.54) | 0.06 (0.01-0.29) | 0.37 (0.0003-400.18) | 0.01 (0.001-0.03) | 0.11 (0.04-0.37) |
| Giraffe (*Giraffa camelopardalis*) | 0.11 (0.04-0.34) | 0.14 (0.03-0.61) | 1.22 (0.44-3.35) | 0.03 (0.01-0.07) | 0.08 (0.03-0.26) | 0.03 (0.01-0.08) |
| Kudu (*Tragelaphus strepsiceros*) | 0.35 (0.19-0.66) | 0.08 (0.03-0.18) | 1.58 (0.61-4.08) | 0.11 (0.06-0.24) | 0.04 (0.01-0.21) | 0.13 (0.01-1.29) |
| Oryx (*Oryx gazella*) | 1.03 (0.07-15.08) | 0.41 (0.21-0.77) | 0.23 (0.11-0.48) | 0.82 (0.02-27.34) | 0.17 (0.004-7.56) | 0.05 (0.003-0.92) |
| Red hartebeest (Alcelaphus *buselaphus caama*) | 0.02 (0.01-0.07) | 0.02 (0.01-0.07) | 0.01 (0.001-0.046) | 0.08 (0.02-0.27) | 0.13 (0.03-0.55) | 0.001 (0.0002-0.01) |
| Springbok (*Antidorcas marsupialis*) | 0.03 (0.01 - 0.13) | 0.20 (0.08 - 0.51) | 0.04 (0.01-0.25) | 0.13 (0.03-0.55) | 0.02 (0.01-0.08) | 0.01 (0.003-0.05) |
| Steenbok (*Raphicerus campestris*) | 7.12 (3.56-14.26) | 6.84 (4.92 – 9.52) | 9.76 (7.59-12.56) | 0.74 (0.45-1.21) | 0.56 (0.34-0.94) | 0.65 (0.42-1.00) |
| Warthog (*Phacochoerus africanus*) | 3.96 (1.77-8.88) | 1.16 (0.39-3.49) | 4.02 (1.61-10.09) | 0.98 (0.54-1.80) | 0.15 (0.05-0.43) | 0.22 (0.09-0.51) |
| Plains zebra (*Equus quagga*) | 0.52 (0.03-2.92) | * * | 11.66 (1.72-79.02) | 0.18 (0.00-83520.46) | 0.06 (0-2574.07) | 0.34 (0.0001-820.88) |
| Impala (*Aepyceros melampus*) | 0.04 (0.01-0.20) | 0.54 (0.09–3.17) | * * | 0.59 (0.16-2.16) | 0.01 (0.003-0.03) | 0.31 (0.08-1.19 |

## F.3 Bush Encroachment and Biodiversity

Bush encroachment is an environmental problem threatening Namibia's rangeland productivity, food security, and biodiversity conservation nationwide. However, it also has the

potential for a renewable source of alternative energy, especially in rural areas, and may alleviate electricity shortages projected to affect Namibia in the near future. The CCF Bush Project, now housed at the Biomass Technology Demonstration Center (BTDC) on the main campus, was established to investigate uses of the encroaching bush. This is the production site for BUSHBLOK®. The former BUSHBLOK® factory in Otjiwarongo continued operations as the CCF depot.

CCF has collaborated with the Namibian University of Science and Technology (NUST) and others for related studies. CCF, the University of Hamburg in Germany and UNAM have an agreement to study the impacts of bush encroachment and bush thinning on soil and vegetation characteristics, and on the savannah water budget. This project is part of the Southern African Science Service Centre for Climate Change and Adaptive Land Management (SASSCAL). The project has three sites in Namibia and includes CCF farms. In November 2014, data collection equipment consisting of rain gauges and soil moisture meters, as well as remote digital data transmitters were installed in previously harvested sites and current bush-encroached sites on CCF farms Cheetah View and Boskop. Both UNAM and Hamburg partners continued with field research during this reporting period, with the involvement of their graduate students and faculty members.

As part of our ongoing research activities, the Biomass programme together with other local and international partners have acquired an EU grant (grant agreement No 101036401; STEAMBIO AFRICA [SBA]) that investigates a torrefaction process using superheated steam. In March CCF was represented in Spain by CCF's executive Director Dr. Laurie Marker and CCF's General Manager Dr Bruce Brewer at the "30th month" meeting of all 15 partner organizations (4 Namibian, 11 Other). CCF Forest and Safety officer, David Shipingana has enrolled for a Master degree program at the University of the Free State, South Africa. David's thesis is based on examining effects of habitat restoration (thinning) towards the soils.

Research activities within the grant scheme include preliminary soil sampling (data collection) to look at carbon content following bush thinning. Soils were collected in June 2024 from CCF farms (Cheetah View, Boskop, and Elandsvreugde) where bush thinning and no thinning had taken place. This sampling process was conducted by the SBA overall project coordinator Prof. Heike Knicker and her research team from Seville, Spain (IRNAS-CSIC), as well as CCF Senior Ecologist and Forest Steward, Matti Nghikembua, Forest and Safety officer David Shipingana and Abraham Shihepo (SBA shift supervisor) (Figure 9 and 10). A total of 76 samples were collected from three different farms and were sent to Spain for laboratory extraction. Analysis of soil properties (chemical and physical properties) between harvested and non-harvested bush encroached habitat to understand long-term natural regeneration and recovery of the soils and restored vegetation continued. The results will be utilised as a baseline for further ecological research and monitoring of harvested sites. The findings have applications to bush harvesting operations in both commercial and communal farmlands. The research will also provide necessary reference information to the public and for farmland management.

The construction of infrastructure for the SBA project continued at the BTDC. The Steam Bio Africa biomass processing plant was delivered and assembled on the site, with

commissioning still ongoing. A 300kW PV array and 240kVA/860kWh power system was installed to support the operations of Steam Bio Africa. A 280KVA diesel generator was also delivered and installed as standby. A control room was constructed for the Steam Bio Africa plant, housing the control panel and HMI panel for operation of the plant as well as desk space and a camera monitoring system. Steam Bio Africa woodchip management shed was erected with interior walls and roller doors, and electrical was completed. The team has installed a shade cloth barrier for ventilation into the shed. A 20m x 35m chip processing slab poured adjacent to the Steam Bio Plant. It takes all biomass wood chips from the field, and then screened them into three different sizes for use in the Steam Bio plant and Bushblok.

A six-unit housing block was constructed and completed at the BTDC, to house Steam Bio related personnel. The unit includes four single rooms with built-in bathrooms each and two apartment units with bedroom, living room, kitchen and built-in bathroom. New signage was put up for Steam Bio Africa and BTDC. The BTDC break area was removed from the operation site and expanded, with more environmental protection and additional seats. The BTDC and SBA received a 1425 Bandit horizontal wood grinder from South Africa, and a screen for sieving wood chips.

*Figure 22: David Shipingana, CCF Forest and Safety Officer, illustrates how biomass soil samples are processed.*

*Figure 23: Soil sampling process conducted in the field by Dr.Matti Nghikembua and David Shipingana.*

David Shipingana continued as Forestry and Safety Officer on the biomass team. Forest Steward and Senior Ecologist Matti Nghikembua successfully defended his Doctoral dissertation at a public examination, held on the 31st May 2024 at the University of Eastern Finland's Carelia C2 Auditorium in Joensuu. Professor Eshetu Yirdaw (Department of Forest Sciences, University of Helsinki, Finland) acted as the opponent, and Professor Ari Pappinen (School of Forest Sciences, Joensuu campus, University of Eastern Finland) acted as the custos in the public examination of the doctoral dissertation. The thesis summary has been published in the Dissertationes Forestales: https://doi.org/10.14214/df.353.

Dr Bruce Brewer, CCF's General Manager, remained active in groups involved with bush encroachment in Namibia. These included the Namibia Biomass Group (N-BiG), and the GIZ/MAWF De-bushing project, which is supported by the German Development Authority.

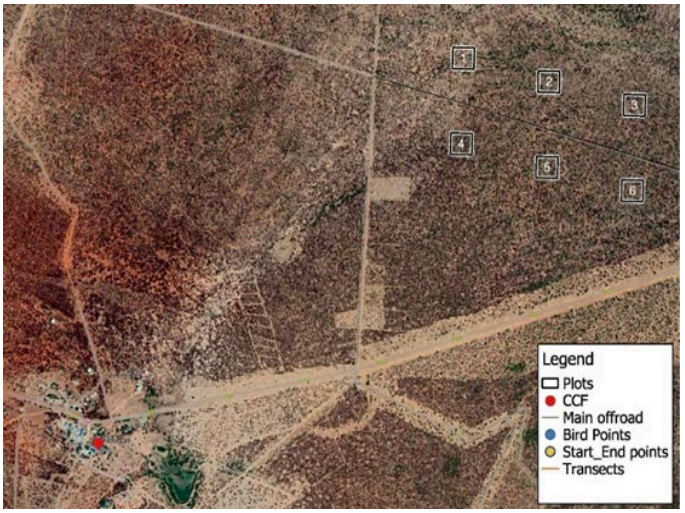
## F.4 Vanier Biodiversity Project

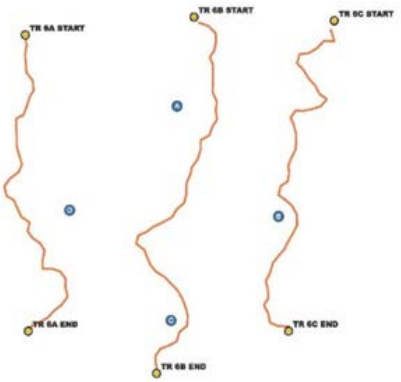
This is a long-term monitoring initiative aimed at assessing the impact of bush encroachment on the fauna and flora of southern African savannas. In collaboration with Vanier College, Canada, CCF established six 1-hectare plots, with four plots to be harvested after two years of assessment. The remaining two plots will serve as control plots, where no bush harvesting will take place.

Ecological assessments occur along transects and at observation points using camera traps, GPS devices, binoculars, sound recording devices, range finders and more. The first phase of the project focused on observing reptile and insect groups, specifically Lepidoptera and Odonata, along transects. Bird species were recorded at the observation points (Figure 11), and camera traps were utilized to identify the types of medium and large mammals using the plots. In the second phase, ground and dung beetles were sampled within each plot to record species or genera (Figure 12). Species identifications were discussed using field guides and online resources such as iNaturalist and Merlin.

The fieldwork conducted as part of this project allows for the establishment of a baseline from which conclusions could be drawn regarding the effects of bush removal on various forms of life.

Two presentations were conducted as part of the project, each focusing on a different section of data collection. The first presentation encompassed the findings from the initial data collection section, which involved studying birds, mammals, reptiles (lizards), and insects (butterflies and dragonflies). The second presentation focused on the second section of data collection, which primarily involved insects (ground and dung beetles). Both presentations provided an opportunity for the team to share their findings, methodologies, and key insights gained from the data collection efforts, contributing to an understanding of the local biodiversity and its ecological significance.



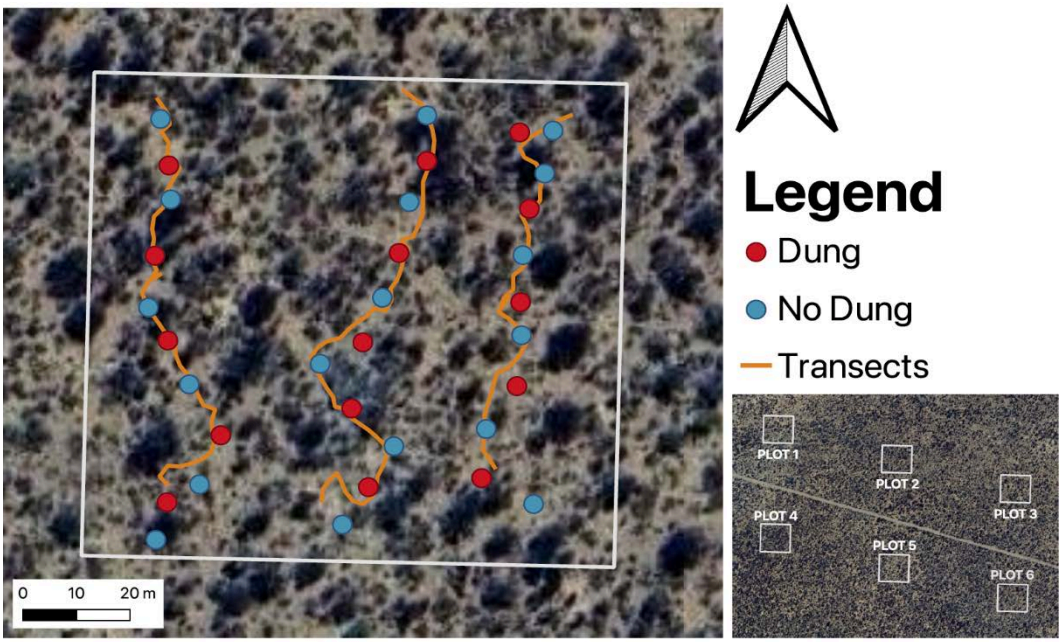




*Figure 24: Example of pitfall trap layout for ground insects at a Vanier plot.*

*Figure 25: Field photos during the first phase of the project.*

The third phase of the project focused on soil sampling. This was done to evaluate soil properties across the six plots, where various soil characteristics were assessed. Each plot was further divided into 4 subplots, where the samples were collected from. The sampling points were selected in each subplot, establishing a total of 24 sampling points with GPS coordinates recorded for each. In each subplot, soil samples were collected from a point at two depths: at 0-15 cm and 15-30 cm, respectfully. Four soil samples were collected beneath the canopy of each tree, along with an additional four samples at the canopy edge (Figure 23). Bulk density measurements were also taken both under the canopy and at its edge. Additionally, samples for microorganism presence were also collected. Soil sampling is fundamental for understanding the health, fertility, and composition of soil in different environments. The results can provide a critical foundation for informed decision-making regarding soil management and land-use planning.

*Figure 26:* Soil samples collection beneath the canopy of each tree

In the final phase, vegetation within the six plots was sampled with a focus on assessing both grass and woody vegetation (Figure 23). Specifically, grass sampling was conducted along a 200-meter transect. At intervals of two meters, species identification was performed, while grass height was measured every five meters, and grass cover was assessed every ten meters. Grass cover was sampled within a 1 $m^2$ quadrant, making use of the visual estimate method. This method categorizes the score into 5 percentage groups of 0-20%, 20-40%, 40-60%, 60-80% and 80-100%. Woody biomass measurements were taken at the center of each subplot within every plot, with particular attention given to documenting encroacher species at each

site. Encroacher species within a six-meter radius were identified and marked. Each species taller than 0.5 meters was recorded, noting its name, height, basal diameter, canopy height, and stem diameter. Additionally, all encroachers (Figure 25) saplings and their heights were recorded on a separate sheet.

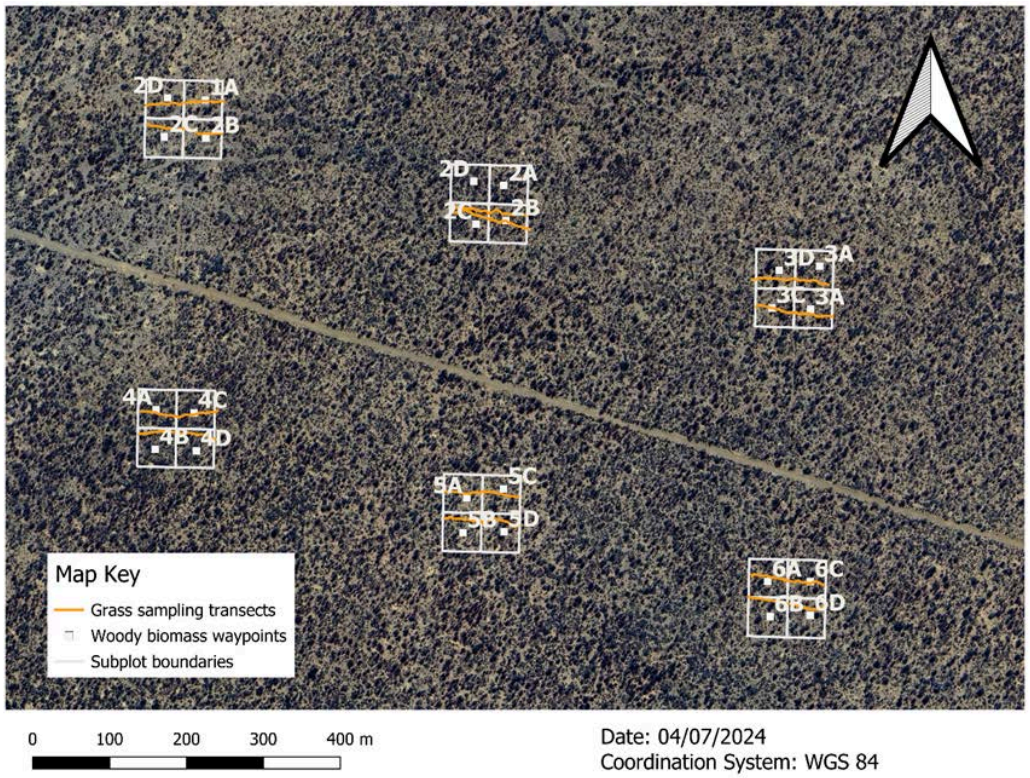



*Figure 27: Grass transects and biomass waypoints at Vanier plots.*

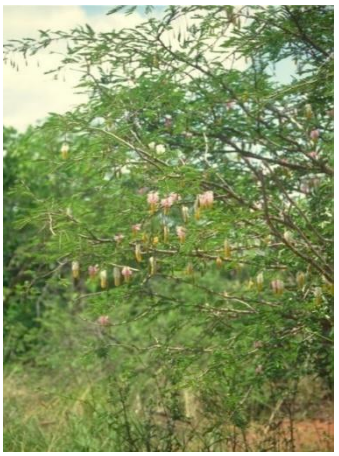


*Figure 28: Encroucher species.*

## F.5 Playtree Research

Cheetahs are known to frequent scent-marking posts ('play trees') for territorial marking and social interactions. Olfactory communication plays a vital role in conspecific interactions as it allows for communication in the absence of the animal. Furthermore, every mark can contain detailed information about the individual who deposited it. Namibian cheetahs are highly selective when choosing sites for scent-marking.

CCF has conducted camera trap monitoring at such scent-marking sites on their property since 2005 to estimate cheetah and leopard scent-marking behavior.

In recent years, we have observed leopards more frequently at play trees. CCF continues to study and investigate the effect of leopards on cheetahs, as we know that interspecific competition may pose a threat to the survival of cheetahs. We just discovered that cheetah's visit these play trees at different times of day and also utilize some play trees that leopards do not frequent. Increasing densities of leopards, as may be the case on Namibian farmlands, may reduce the availability of scent-marking sites for cheetahs, so we continue to monitor the interactions between these two fields.

There are 6 play trees being monitored currently, namely Eli's play tree, Field 6, Field 1, Osonanga West, Osonanga Road West, OS04 and Elandsvreugde. Based on data from the weekly monitoring of these play-trees, leopards tend to utilize Field 6 and Field 1, with occasional appearances at OS04.In addition; cheetahs have been spotted occasionally at Field 6 and Osonanga Road West, although the majority of sightings have taken place at Elandsvreugde.

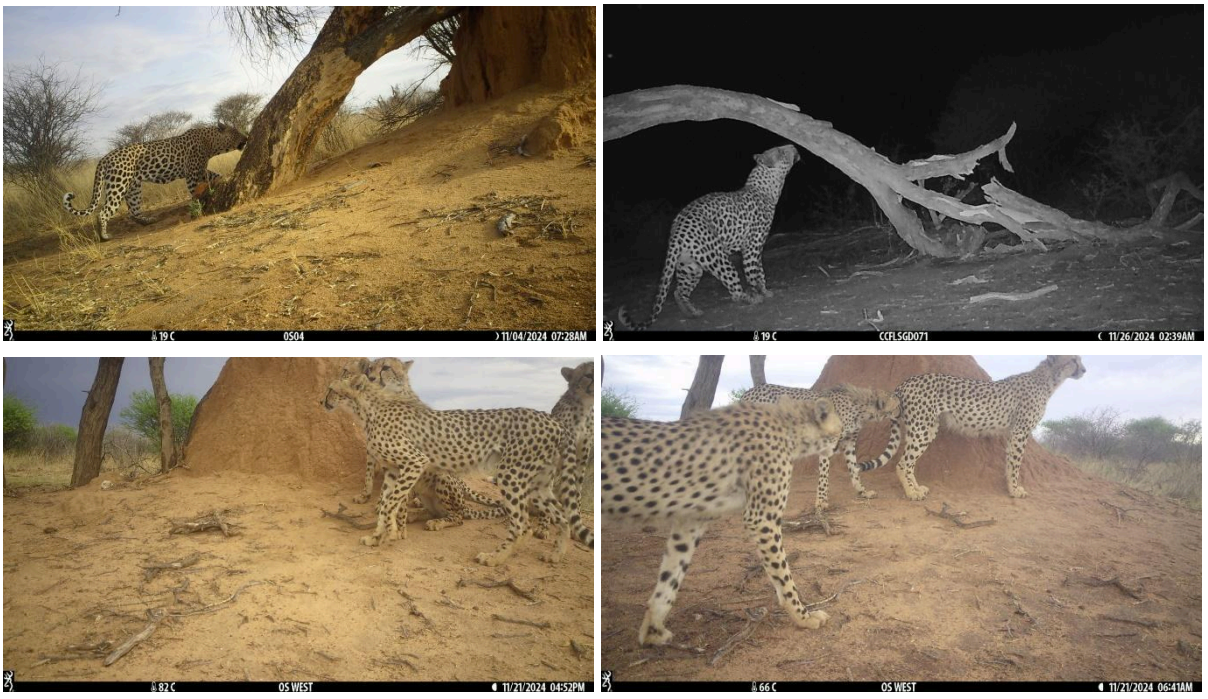



*Figure 29: A few camera trap photos of leopards and cheetahs at play trees in 2024.*

## F.6 Giraffe Monitoring

Ground surveys were conducted across nine CCF farms during 2024 to monitor giraffe populations. These surveys assessed giraffe age and sex ratios, distribution, and population numbers. Seasonal game counts during the **hot-wet** (April-May), **cold-wet** (July-August), and **hot-dry** (October-November) seasons provided valuable insights into giraffe ecology. Observations included photographing each giraffe, identifying its sex, and estimating its age class (calf, sub-adult, or adult) based on physical characteristics. A total of 139 giraffe observations were recorded throughout the year, with significant variation in sightings across farms and seasons (Figure 18). Elandsvreugde and Bellebenno consistently recorded the highest number of observations across all seasons, with minimal or no sightings on other farms such as Bynadaar, Boskop, and Osonanga (Figure 18).

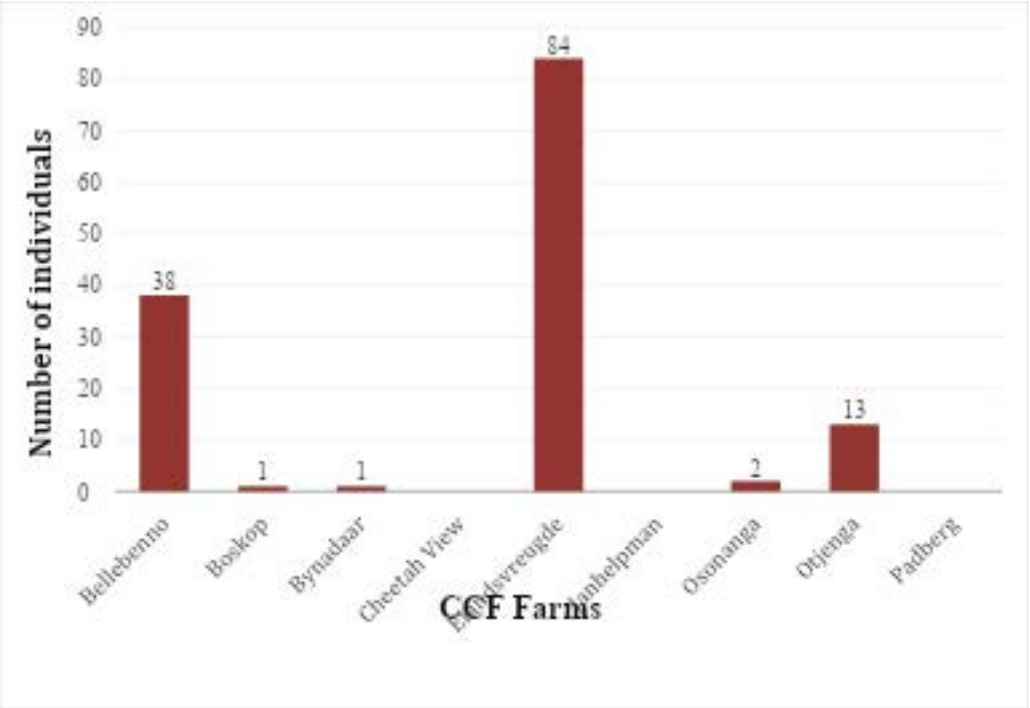



*Figure 30: Total giraffe observations across CCF farms.*

During the April-May seasonal count, there was a total observation of 49 giraffes, comprising 29 adults, 14 sub-adults, and 6 calves. Most sightings occurred in Bellebenno (25 observations) and Elandsvreugde (19 observations), while Otjenga recorded 3 sightings and Osonanga only 2 sightings. No sightings on the other farms. The **hot-wet** season showed the greatest diversity in giraffe distribution, with sightings spread across more farms compared to other seasons.

During the July-August game counts, giraffes were observed 41 times, comprising 23 adults, 17 sub-adults, and just 1 calf. The majority of sightings occurred in Elandsvreugde (28 observations) and Otjenga (10 observations), while Bellebenno recorded only 3 sightings. No giraffes were seen on the remaining farms during this count. During the **cold-wet season**, sightings concentrated in fewer locations, particularly Elandsvreugde and Otjenga, with a sharp decline in calf observations.

In October, giraffes were observed 49 times, including 37 adults, 7 sub-adults, and 5 calves. Most sightings occurred in Elandsvreugde (37 observations) and Bellebenno (10 observations). Bynadaar and Boskop each recorded a single sighting, while no giraffes were observed on the other farms. The **hot-dry season** saw a return of high observation numbers, primarily in Elandsvreugde, with fewer sightings in peripheral farms.

Regarding sex distribution, females were observed more frequently than males, with 56 sightings (Figure 28). Of the 139 total observations, 37 were identified as male. The highest numbers of both male and female sightings were recorded in Elandsvreugde and Bellebenno, with a greater proportion of females observed overall (Figure 20). Additionally, 46 giraffes were classified as "unknown" due to their distance from the observation points (Figure 19).

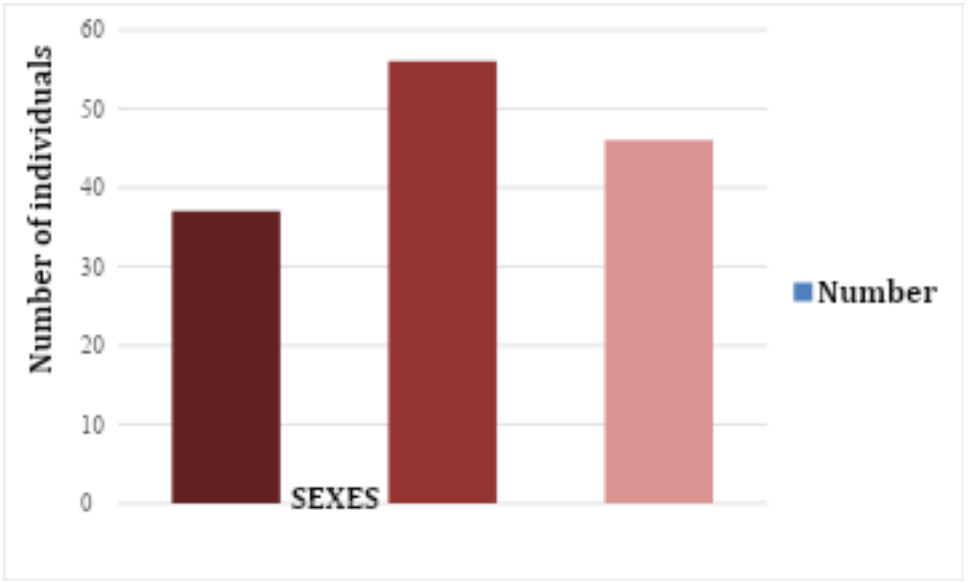



*Figure 31: Total number of giraffes observed by sex group across the season.*

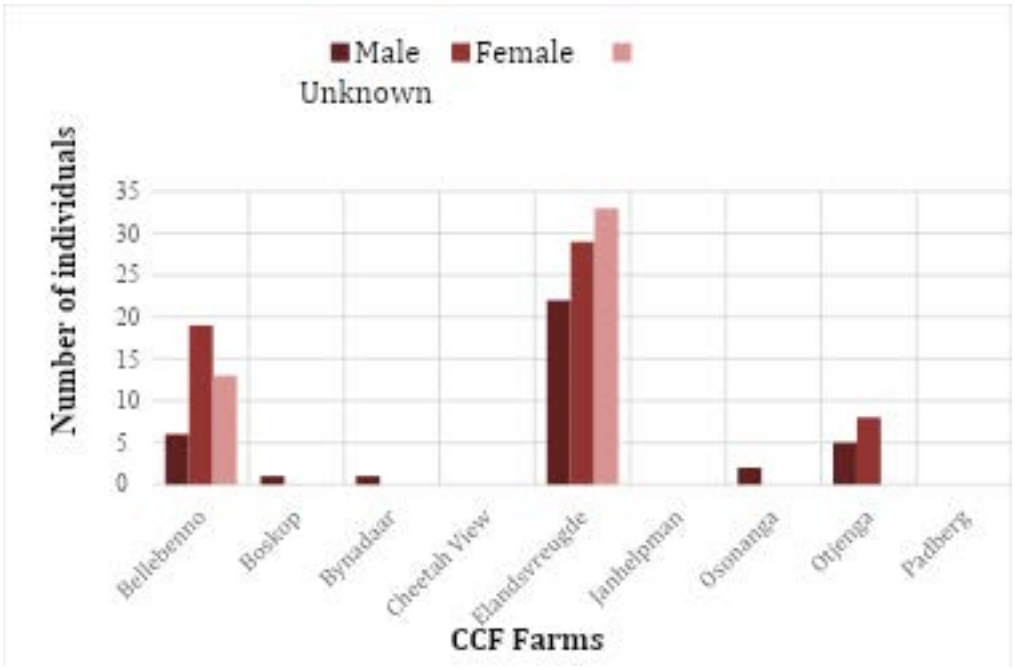



*Figure 32: Total number of giraffe observations by sexes and CCF farms.*

The age distribution of the giraffe population showed notable variation. Adults accounted for the majority, representing 64% of the observations. Sub-adults accounted for **27%**, while calves represented **9%** of the population (Figure 29). The number of calves observed was highest during the hot-wet season (April-May) and declined significantly during subsequent counts, with just one calf recorded in July-August

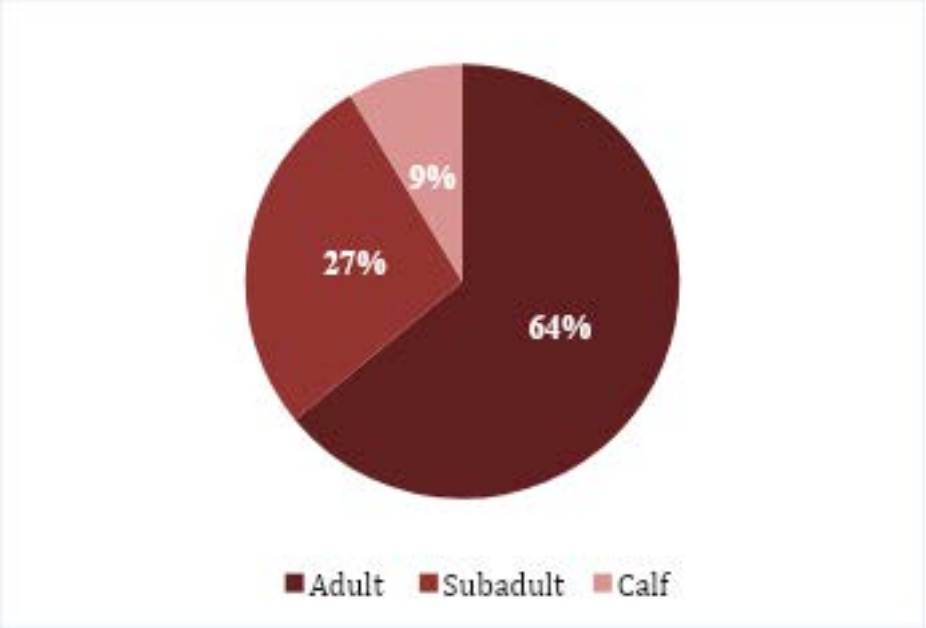



*Figure 33: Total percentages of giraffe observations per age class over the course/duration of the seasonal game count survey.*

Figure 34: *Solitary male giraffe*

*Figure 35: Sub adult giraffe*

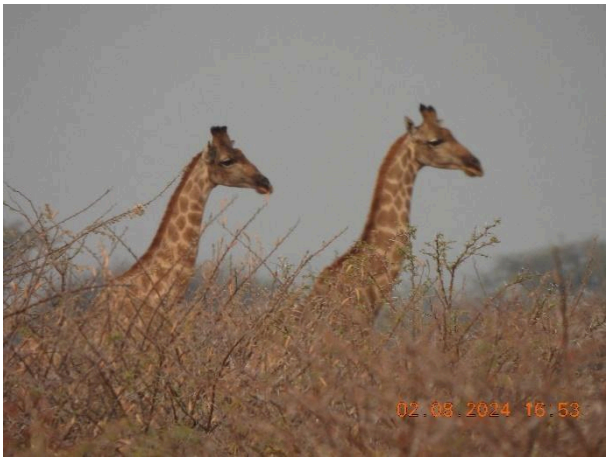


*Figure 36: Two sub adult giraffes foraging on Acacia sp.*

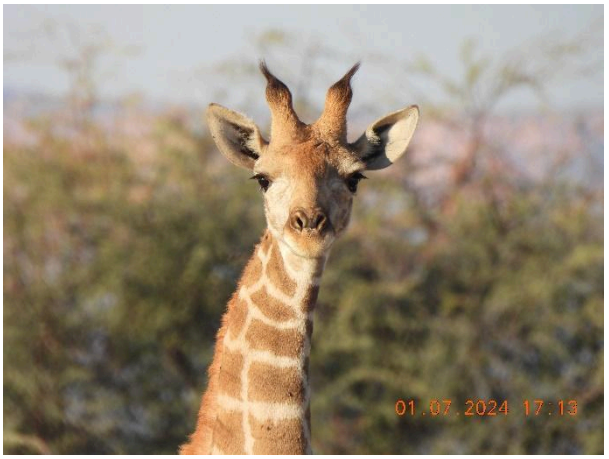



*Figure 37: Male giraffe captured during the count*

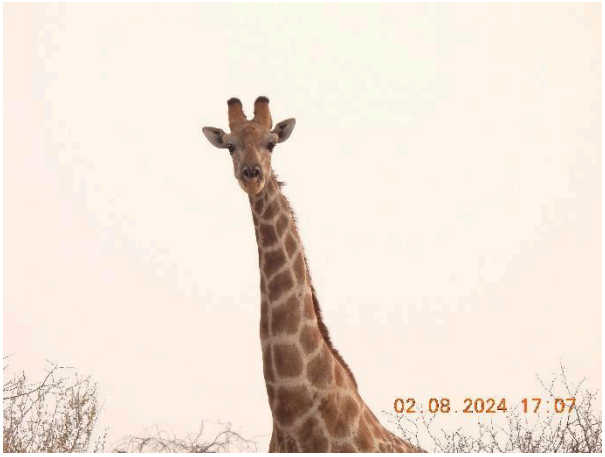



*Figure 38: Giraffe picture captured during the counts*




*Figure 39: Young female giraffe*

## F.7 CCF Rhino Reserve

CCF continues to monitor its 158 km$^2$ rhino reserve, where a small population of south-western black rhinos (*Diceros bicornis occidentalis*) resides. The rhinos are part of the Namibian Ministry of Environment, Forestry, and Tourism's (MEFT) Black Rhino Custodian Program. Ecology staff members monitor the rhinos intensively and are familiar with the names and unique physical features of individual rhinos.

All rhinos were captured on camera traps in 2024.


*Figure 40: Black rhino photographed by camera traps as part of the intensive monitoring programme.*

# F.8 Research Projects

## F.8.1 Rapid Assessment of livestock impact on terrestrial biodiversity around waterholes in CCF areas

### Background

Water is vital for wildlife survival, with water points serving as key congregation sites. This study aims to rapidly assess waterholes' role in supporting biodiversity, informing efficient conservation strategies. Over two and a half months, the research focused on the Cheetah Conservation Fund (CCF) livestock farms and game reserve, aiming to understand the ecological dynamics influenced by livestock presence near water sources. This understanding is particularly crucial in habitats critical to the conservation of cheetahs and other wildlife species. The semi-arid woodland savannah ecosystem of the CCF property experiences seasonal water scarcity. To mitigate this, CCF has harnessed natural catchments and created artificial waterholes used by both wildlife and livestock. The impact of livestock on vegetation, birds, ground beetles, and mammals around these waterholes is unclear. Addressing this knowledge gap is essential for targeted conservation strategies balancing wildlife preservation and sustainable livestock production. The main objective of this study is to investigate and compare the impact of livestock on vegetation composition and structure, as well as the biodiversity of birds, ground beetles, and mammals around waterholes within the CCF area.

## Study Area

The study was conducted in a section of the CCF Reserve and on all CCF mixed-use farms at specific waterholes (Figure 23). The data collection period lasted from January 10, 2024, to February 9, 2024, during the rainy season. Data were collected each morning between 8:00 and 11:00, with only one waterhole sampled per day. Mammals were surveyed with camera traps active continuously for one month.

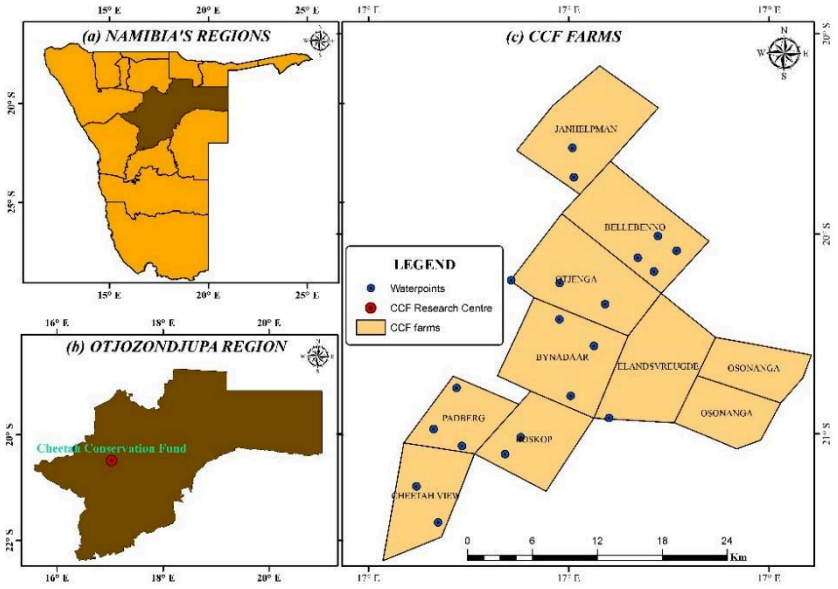



*Figure 41: Map of the study area highlighting the waterholes in a section of the CCF Reserve and mixed-use Farmland.*

## Methods

Waterholes were selected based on accessibility and to sample a broad geography across the CCF property. Using the systematic transect method, the area around 20 waterholes was divided into four transects per waterhole, laid out perpendicular to one another. Each transect was surveyed 50 meters from the edge of the waterholes. Visual surveys were conducted along each transect, with recordings taken every 2.5 meters, at 5 meters on either side of the transect, to record trees, shrubs, grasses and herbs to measure their height at each point. Additionally, a drone was flown 150 meters above the ground to capture images of the vegetation cover at each waterhole.

The randomized point observation method was used to identify bird species within 50 meters above the ground and on the ground within the same range. A range finder was used to measure distances from the human observer to the bird, and bird sounds were recorded using a digital tablet and microphone. A digital SLR camera was employed to photograph birds for identification. For ground beetle sampling, visual identification methods were employed, with a digital SLR camera used to photograph beetles for identification. Ground beetles first observed within 1 meter on either side of the transect were counted at 5-meter intervals. Camera traps were used to capture photos and identify mammal species at waterholes, deployed at a height of 1.5-2 meters and angled for optimal detection. Data from camera traps was collected over a month, with batteries fully charged and a 32 GB SD card used for storage.

The project is currently in the final stages.

# Observations of disturbances by mesocarnivores on Anatolian shepherds and Kangal dogs at the CCF facility during night-time

## Background

Anatolian shepherds and Kangal dogs are commonly used as livestock guardian dogs in many parts of the world to protect livestock against predation. They have proven to be very effective at reducing livestock lost to predators. The Cheetah Conservation Fund located in northern Namibia breeds and raises these dogs in order to help mitigate the human-wildlife conflict in Namibia. The dogs at the facility often bark at night, indicating the presence of a potential threat to their flock. We utilized camera trap data to analyze what species are coming close to the facility and whether there could be management changes to prevent this. There could be a variety of species of interest, particularly mesocarnivores such as cheetahs (*Acinonyx jubatus*), leopards (*Panthera pardus*) and jackals (*Canis mesomelas*), which would likely be causing the dogs to bark. There could also be herbivores that could be causing the dogs to bark, such as duikers (*Sylvicapra grimmia*) or steenbok (*Raphicerus campestris*).

Research Question:

1) What kinds of animals are causing these livestock guarding dogs to alert at night?
2) Could there be management changes to prevent these animals from coming into the facility at night?

## Methods

A map of the main kraal area was created using QGIS and a 150 m buffer zone was placed around it. Inside that buffer zone there were 40 random points generated as potential camera locations (Figure 24). 20 of the closest, reasonable points to the kraal were chosen as camera locations. Each camera was placed within 10m of the randomly generated location, except for two cameras, one placed 40m away and another being placed 30m away due to location issues. When activated, the cameras will record a 15 second video, where I take note of the species present, behavior, and whether dogs were barking or not. When a new species enters the camera view, this will be considered a detection event, with all consecutive videos of the same species being grouped into the same detection event. There must be a null period of at least 10 minutes of no detections in order to be considered a separate detection event. The cameras were only active from 18:30h to 7:30h. Due to time constraints, 196 random videos were selected from every SD card to be analyzed, approximately every four days. Data was structured into a spreadsheet.

*Figure 42: Top-down satellite image showing the main kraal area (red), 150m buffer (light purple) and each camera trap location around the Cheetah Conservation Fund (green dots).*

### Preliminary results

Duikers emerged as the most frequently detected species, with a total of 61 sightings. Among predator species, genets and jackals were the only representatives recorded. Notably, jackals were the most numerous, with 37 detections. Other species detected included scrub hares, honey badgers, steenboks, spurfowls and guineafowls. Other smaller songbirds were excluded from the count due to identification challenges. Only the cameras that had dogs in their line of sight were taken into account for barking observations. Jackals were the most common animal barked at 14 occurrences, with duikers being the second most common at 6 occurrences. Notably, when observing only jackals, dogs barked at them only 52% of the time when they were visible, indicating that dogs might not be as vigilant towards jackals compared to other predators. Management changes may be implemented to deter jackals, the sole mesocarnivores observed, due to their unreliable responses to barking.

## Caracal Behavioural Adaptations in Human-Dominated Landscapes

### Background

Human-wildlife conflict, particularly livestock predation, poses a significant threat to predator populations worldwide and is a leading driver of large carnivore declines. The resulting loss of apex predators can lead to mesopredator release, where smaller predator populations expand unchecked, exacerbating conflicts in human-dominated landscapes. In these areas, livestock frequently constitutes a key part of mesopredator diets, intensifying tensions between wildlife and humans.

Caracals (*Caracal caracal*) are significant contributors to human-wildlife conflict in Namaqualand, South Africa, where extensive livestock farming dominates the landscape. The region has seen the near extirpation of apex predators, except for the leopard (*Panthera pardus*), which occurs in low numbers. Despite the involvement of caracals in livestock-related conflicts, little is known about their utilization of human-modified

landscapes. Understanding their behaviour in these landscapes is crucial for developing effective mitigation strategies to reduce conflict and promote coexistence. This study aims to investigate how caracals navigate human-modified landscapes by examining the influence of human presence on their movement ecology and feeding behaviour.

## Study Area

The study is conducted on approximately 330 km² of commercial farmland adjacent to Namaqua National Park in South Africa's Northern Cape Province (Figure 25). Situated within the Succulent Karoo Biome, the area is characterised by semi-arid conditions, winter rainfall (100–250 mm annually), and a mix of livestock farming and natural prey species, including small antelopes and rock hyrax.

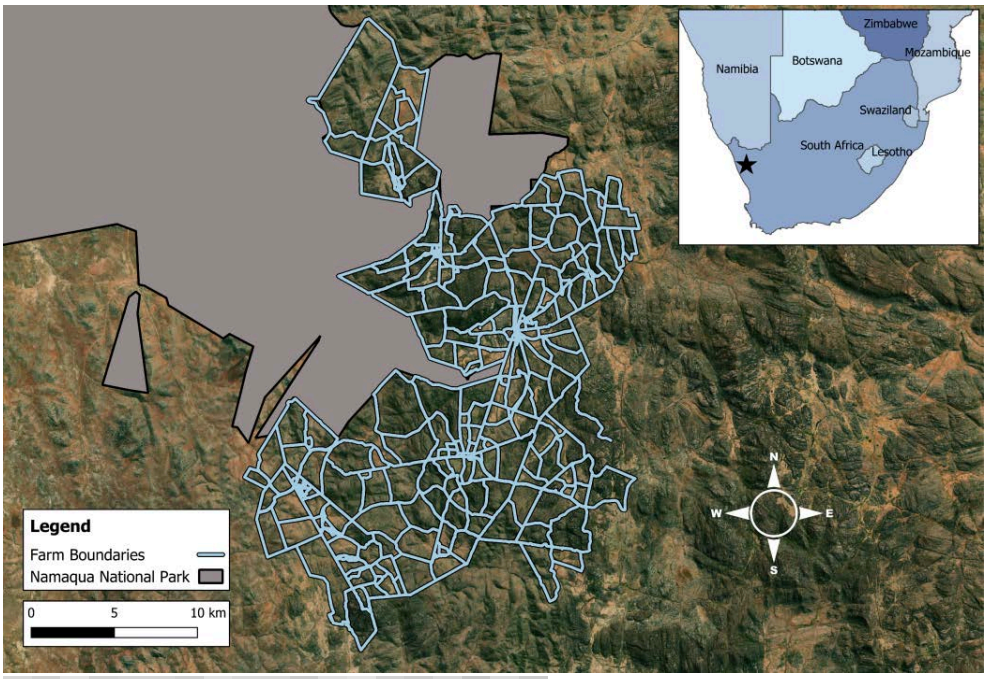



*Figure 43: map indicating the study area*

## Methods

Caracals were fitted with Global Positioning System (GPS) collars between March 2014 and February 2015, with all procedures conducted under appropriate permits and ethical guidelines. GPS collars were programmed to record locations at 3-hour intervals, with additional data collected at finer scales for some individuals.

Movement metrics, including step length (distance between consecutive GPS points) and path tortuosity (path straightness), were analyzed to assess behavioural shifts. Data were cleaned and resampled to standardize the intervals to 3 hours, with generalized linear mixed models used to investigate the effects of age, sex, seasonality, livestock guardian dogs and proximity to human presence on movement metrics.

To assess feeding behaviour, GPS data were clustered with R package "GPSeqclus" using spatial and temporal criteria (50 m radius and 6-day duration) to detect potential kill sites. These clusters were cross-referenced with known carcass locations for validation. Distances from kill sites to features such as roads, fences, and houses were calculated and used as

explanatory variables in a generalized linear mixed model to understand how human infrastructure influences caracal feeding duration and selection of prey species.

## F.9 Human-wildlife coexistence toolkit for biodiversity conservation and rural community sustainability

### Timeline: Sept 2024 – July/August 2027

### Partners

UK Government, Namibia Nature Foundation (NNF), Namibia Association of CBNRM Support Organisations (NACSO), Elephant-Human Relations Aid (EHRA), Ministry of Environment, Forestry & Tourism (MEFT), University of Namibia (UNAM), Namibia University of Science and Technology (NUST).

### Background

This project will address threats to biodiversity conservation and rural poverty by developing a model (toolkit) for human-wildlife coexistence within shared landscapes of Namibia. The effectiveness of the community-centred model will be assured through robust spatial-temporal understanding of conflict patterns, processes, and drivers. The project will integrate social science, ecological and genetic techniques to generate the knowledge required for toolkit development. The activities conducted between September and December 2024 were pivotal in building a strong baseline understanding of human-wildlife interactions, conflict distribution, and hotspots within the study site while fostering collaboration with conservancy leaders and project partners to enhance long-term conservation efforts.

### Study Area

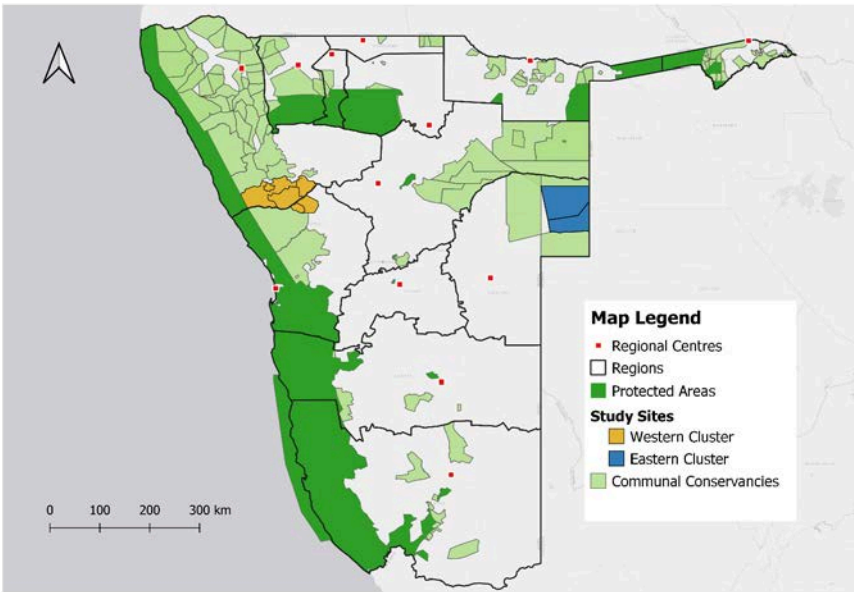



*Figure 44: Map of communal conservancies in Namibia and the study areas highlighted in orange (Western cluster) & blue (Eastern cluster).*

A) i) Eiseb, and ii) Omuramba ua Mbinda (eastern cluster)
B) iii) Doro !nawas, iv) Sorris Sorris, v) Otjimboyo, vi) Ohongu, vii) Twyfelfontein, and viii) Khoro Goreb (western cluster)

## Methodology

Building on the successes of past surveys and implementation in other parts of Namibia, the project strategy combines different interdisciplinary approaches: a) use of detection dogs for carnivore scat collection, b) camera trapping, c) questionnaires and participatory workshops, d) community training and employment to monitor human-wildlife interactions, e) genetic techniques to quantify actual livestock depredation, and f) community empowerment to implement practical and effective mitigation of human-wildlife conflicts. The following activities were done during the reporting period.

### Camera Trap Deployment

Camera traps were strategically deployed across the two clusters to determine the occurrence and distribution of wildlife species and identify areas of conservation importance. A total of 114 camera traps were placed in a random grid based design across the two study sites. The cameras will run until April 2025 to cover both the dry (sep-nov) and wet (dec-april) seasons and distribution of wildlife.

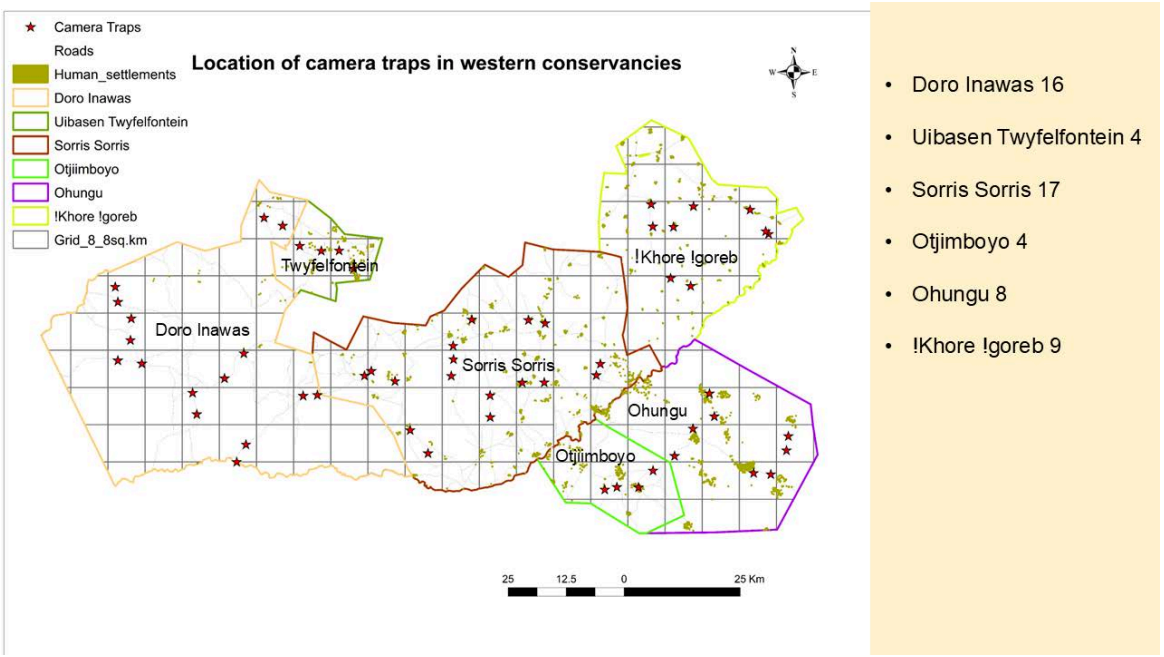



*Figure 33: Camera trap deployment within the western cluster*

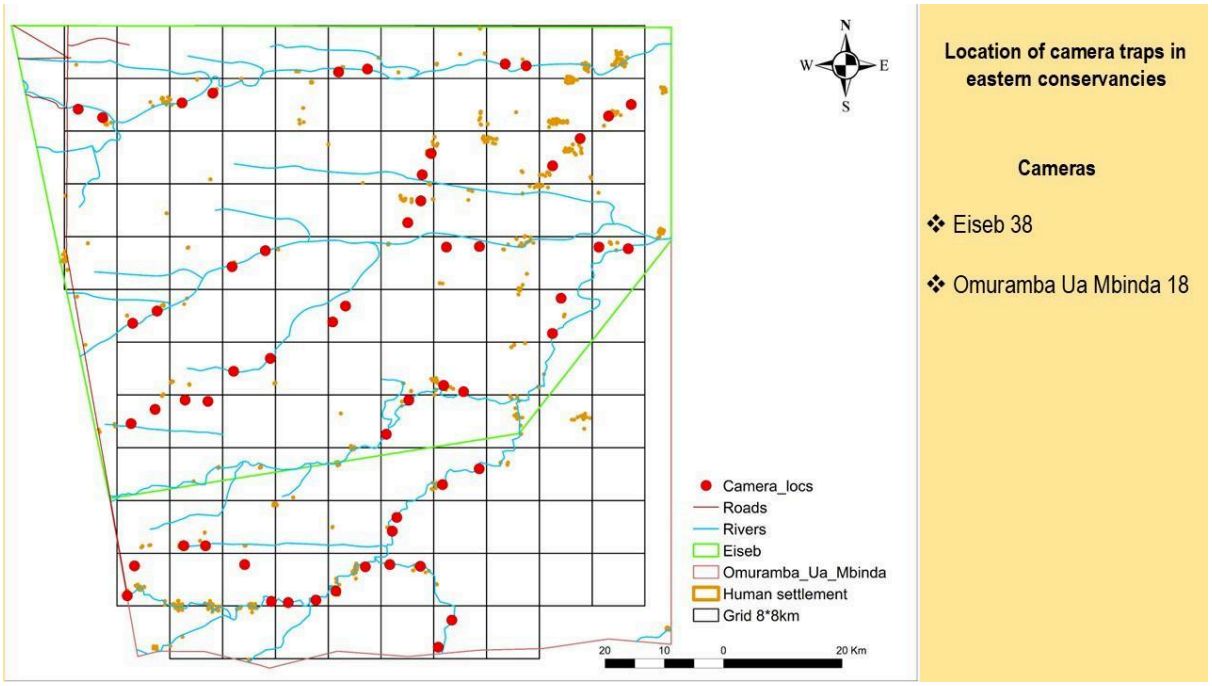



*Figure 45: Camera trap deployment within the eastern cluster*

## Scat Collection and Analysis

A total of 200 carnivore scat samples were also collected from both the clusters. This will provide baseline information on carnivore diets and human-carnivore conflicts.

### Meetings with Conservancy Leadership

To strengthen the connection between scientific research and practical conservation efforts, several meetings were held with conservancy leadership during the reporting period.


Figure 46: consulting meetings with Western conservancies

These engagements allowed for an exchange of knowledge and fostered a collaborative approach to sustainable wildlife management. Local leaders were particularly receptive to incorporating research findings into their land management and policy decisions, with a focus on reducing human-wildlife conflict.

**Conclusion and Next Steps**
Moving forward, activities in the project are:

- Questionnaire survey and focus group discussions to measure perceived losses to wildlife
- Recruitment and engagement of community game guards for monitoring human-wildlife interactions
- Measure actual losses to wildlife through genetics and community involvement
- Development of human-wildlife coexistence toolkit
- Collaboration with project partners and stakeholders to implement toolkit

## F. 10 Assessing Carnivore Occurrence in N#a-Jaqna Conservancy to inform targeted workshops to reduce Human-Predator Conflict

### Background

Large carnivores are crucial for healthy ecosystems, but many species are threatened by human activities. It's vital to know where these animals are and how many there are. This helps set hunting limits and plan conservation efforts to reduce conflicts with local communities. Improved livestock management can mitigate losses due to predators and facilitate an improved livelihood for local communities.

The Cheetah Conservation Fund, in partnership with the Ministry of Environment, Forestry and Tourism and the N#a-Jaqna Conservancy, conducted a survey from mid-May to late June 2024. The study aimed to better understand the distribution patterns of medium- to large-sized mammals, particularly carnivores, in the southeastern part of the Conservancy. The survey covered an area of 384 km$^2$, employing a systematic grid of 24 cells (4km x 4km).

### Methods

*Scat Detection Dog Survey*

We conducted scat detection dog transects along existing road networks in and outside of the sampling grid. We conducted additional searches for scat samples at points of interest (e.g. road junctions, marking sites, waterpoints) in and outside of the sampling grid.

*Camera trap survey*

We deployed 25 double-sided camera trap stations near the centroids of every grid cell. We targeted placement alongside roads and game trails. When the centroid was not easy to reach due to poor road access, the camera traps were placed elsewhere within the cell along where road access was possible.

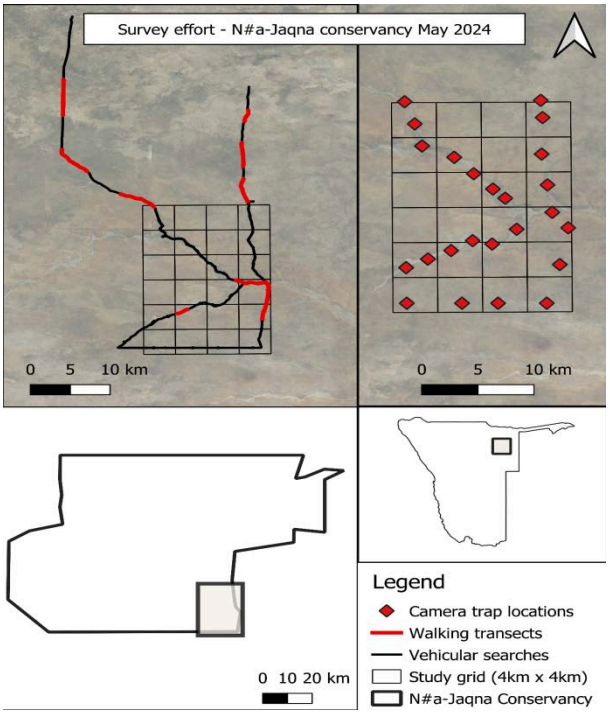



*Figure 47: Survey effort for the scat detection dog survey and the camera trap survey in N#a-Jaqna Conservancy (May 2024).*

## Results

### *Scat Detection Dog Survey*

We walked a total of 49.5 km of road transects with two scat detection dog teams. This resulted in the detection of 59 scat samples including an accumulation of six very fresh African wild dog scats, along with tracks indicating the presence of approximately eight adult dogs (Table 5). Additionally, we drove 266 km conducting vehicular searches for cheetah play-trees and other marking sites, resulting in the collection of 14 scat samples, most of which were found at hyaena latrines. Of the total 73 samples, 34 were found within, and 39 outside of the camera trapping grid (Figure 30).

*Table 10: List of putative carnivore species detected during the scat detection dog survey.*

| Putative Species | Number of samples |
|---|---|
| Hyaena | 36 |
| African wild dog | 15 |
| Leopard | 12 |
| Jackal | 6 |
| Caracal | 2 |
| Genet | 1 |
| Mongoose | 1 |
| **Total** | **73** |

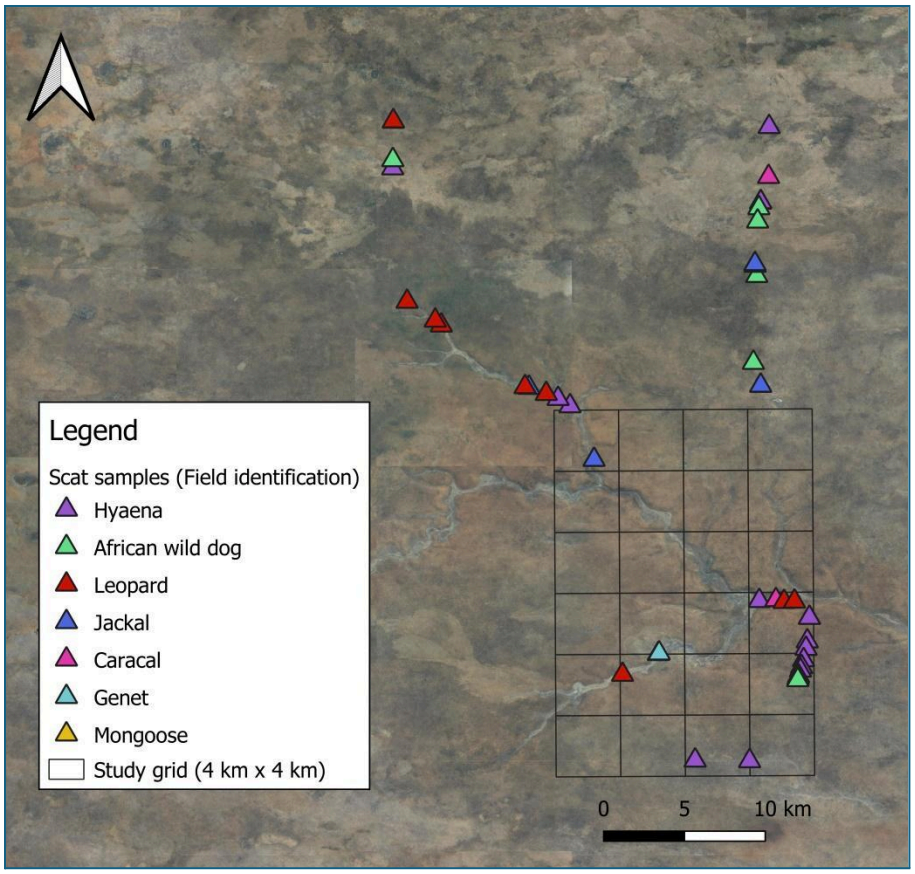



*Figure 48: Scat sample locations*

## Camera trap survey

The camera trapping effort totaled 1,794 trap nights, yielding 2,122 independent detections across 28 wildlife species (Table 6 & 7). On average, each station recorded 16 species and 92 detections (Figure 31). Over the study period, cameras went missing from two locations.

*Table 11: List of species detected during the camera trap survey.*

| Species | Species group | Indep captures (>30min) | Naïve occupancy |
|---|---|---|---|
| People/Vehicle | Domestic | 270 | 1 |
| Scrub hare | Sundry | 239 | 0.57 |
| Steenbok | Small herbivore | 218 | 1 |
| Springhare | Sundry | 181 | 0.61 |
| Brown hyena | Large carnivore | 172 | 0.96 |
| Porcupine | Sundry | 155 | 0.96 |
| Cape fox | Small carnivore | 110 | 0.65 |
| Aardwolf | Small carnivore | 96 | 0.7 |
| Jackal | Small carnivore | 89 | 0.7 |
| Slender mongoose | Small carnivore | 67 | 0.61 |
| Duiker | Small herbivore | 66 | 0.78 |
| Donkey/horse | Domestic | 59 | 0.39 |
| Yellow mongoose | Small carnivore | 47 | 0.52 |
| Domestic dog | Domestic | 44 | 0.78 |
| Leopard | Large carnivore | 43 | 0.57 |
| Spotted hyena | Large carnivore | 36 | 0.7 |

| | | | |
|---|---|---|---|
| Wild cat | Small carnivore | 34 | 0.52 |
| Caracal | Small carnivore | 33 | 0.52 |
| Oryx | Large herbivore | 26 | 0.43 |
| Striped polecat | Small carnivore | 25 | 0.61 |
| Warthog | Small herbivore | 23 | 0.39 |
| Aardvark | Sundry | 22 | 0.22 |
| African wild dog | Large carnivore | 15 | 0.52 |
| Honey badger | Small carnivore | 14 | 0.35 |
| L. genet | Small carnivore | 14 | 0.22 |
| Bat-eared fox | Small carnivore | 7 | 0.17 |
| Cheetah | Large carnivore | 6 | 0.22 |
| Serval | Small carnivore | 4 | 0.17 |
| Elephant | Sundry | 3 | 0.09 |
| Baboon | Sundry | 2 | 0.04 |
| Eland | Large herbivore | 1 | 0.04 |
| Sheep/goat | Domestic | 1 | 0.04 |

*Table 12: Number of species detected during the camera trap survey, categorized by species group.*

| Species group | Species richness |
|---|---|
| Domestic | 4 |
| Small herbivore | 3 |
| Large herbivore | 2 |
| Small carnivore | 12 |
| Large carnivore | 5 |
| Sundry | 6 |

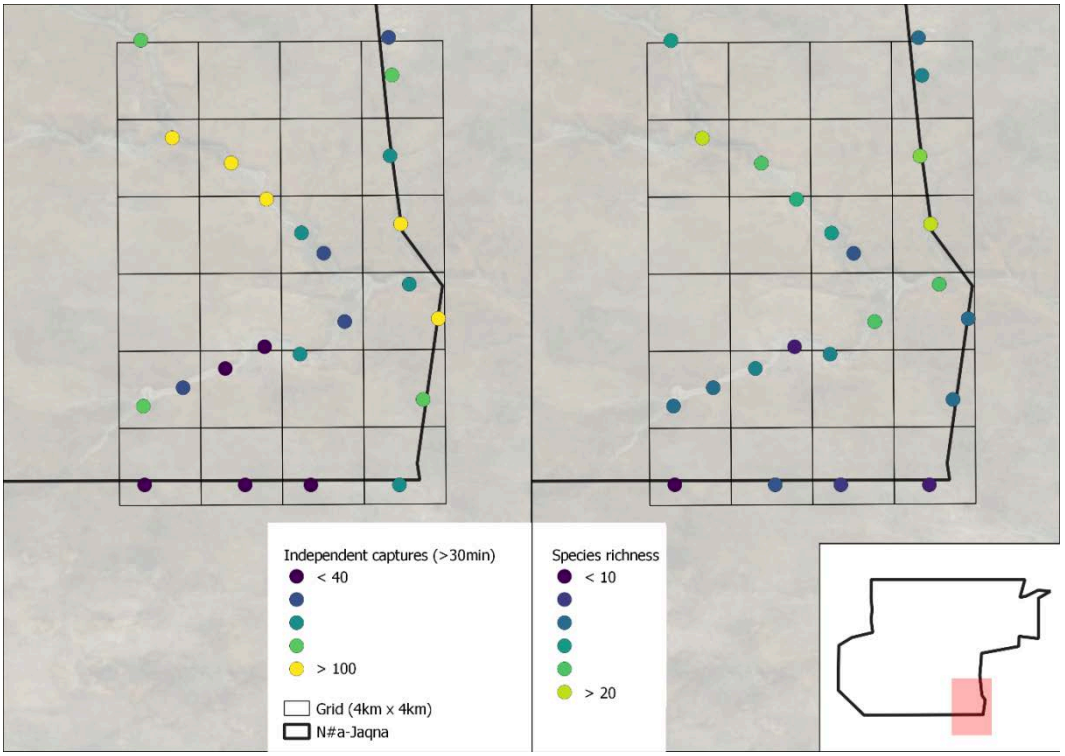



*Figure 49: Independent captures (left) and species richness (right) per camera trap station.*

Figure 50: Image of Scat and Ecology team

Figure 51: Image of a camera trap in the field

# G. Research and Scientific Papers

## G.1 Visiting Researchers

Professor Dr. Samual Wasser from University of Washington

Willie Weir and Mike McDonald

Steve O'Brien and Klaus Koepfli

## G.2 Magazine Articles

Basto A, Hidalgo A, Marker L, Delie D, Schmidt-Küntzel A (2024). Cheetah Conservation Fund protects wildlife, dogs and people through rabies vaccination. Conservation and the Environment in Namibia, pp50-53.

## G.3 Published Papers


Basto AFF, Anahi Hidalgo A, , Marker L Bornman N, Schmidt-Küntzel A (2024). Penile abnormalities in wild-born captive cheetahs (*Acinonyx jubatus*). Journal of Zoo and Wildlife Medicine, 55(4):1076-81.

Cristescu B, Jhala YV, Balli B, Qureshi Q, Schmidt-Küntzel A, Tordiffe ASW, van der Merwe V, Verschueren S, Walker E & Marker L (2024). Spatial ecology of cheetahs in India and the complexities of the real-world context. Conservation Science and Practice, 6:e13169.

Devarajan K et. al. [224 co-authors]. 2011. When the wilds things are: Defining mammalian diel activity and plasticity. Science Advances 11:eado3843.

Dimbleby J, Cristescu B, Bandyopadhyay K, Rooney NJ, Marker L (2024) Rewilding landscapes with apex predators: Cheetah (*Acinonyx jubatus*) movements reveal the importance of environmental and individual contexts Frontiers in Conservation Science 5: 1351366.

Gallo A, Schmidt-Küntzel A, Petersen L, Moya MJ, Marker L, Lemasson A, Hausberger M (2024). Agenda of early life experience and its association with sensitivity to human presence and familiarity in wild-born orphaned captive cheetahs. Animals, 14(22):3223.

Hofmann T, Verschueren S, Balkenhol N, Hamalwa H, Neumann S, Marker L, Schmidt-Küntzel A (2024). Assessing two detection dog-based sampling strategies targeting cheetah scat in diverse environments of central-east Namibia. Journal Namibia Scientific Society 2024, 71:27-36.

Marker L, Schmidt-Küntzel A, Walker EH, Nghikembua M & Cristescu B (2024). Time to independence and predator-prey relationships of wild-born, captive-raised cheetahs released into private reserves in Namibia. Ecological Solutions and Evidence, 5:e12342.

Marker, L., Shipingana, D., Fleury, G., Pfeiffer, L., Pöntinen, A., Cristescu B, Nghikembua, M.T. (2025). Promoting human-carnivore coexistence through outreach in Namibia's eastern communal conservancies. Wildlife Biology 2025:e01377.

Reasoner E, Marker L, Verschueren S, Briers-Louw W, Mbidzo M, Cristescu B (2024). Relative abundance of a mesocarnivore in a human-dominated, semi-arid rangeland in Namibia. Frontiers in Ecology and Evolution 12:1333162.

Schmidt-Küntzel A, Yashphe S, Hamalwa H, Ismail SH, Tricorache P, Brewer B, O'Brien SJ, Marker L (2024) Genetic support to uplist an African cheetah subspecies, *Acinonyx jubatus soemmeringii*, imperiled by illegal trade. Conservation Science and Practice, 6.1:e13052.

Storch I, Cristescu B, Fabiano E (2025). Human–wildlife conflict and coexistence in the African context. Wildlife Biology 2025:e01432.

Verschueren S, Bauer H, Cristescu B, Leirs H, Torres-Uribe C, Marker L (2024) From popularity to preservation: Large carnivore potential for ecosystem conservation. Mammal Review. 55:e12365.

Verschueren S, Hofmann T, Briers-Louw W, Kakove M, Leirs H, Bauer H, Marker L, Cristescu B (2024) A diminished large carnivore guild with contrasting species-habitat associations persists outside national parks in Namibia's central-eastern landscape. Biological Conservation, 297:110741

Verschueren S, Hofmann T, Schmidt-Küntzel S, Kakove M, Munyandi B, Bauer H, Balkenhol N, Leirs H, Neumann S, Cristescu B, Marker L (2025). Combining detection dogs and camera traps improves minimally-invasive population monitoring for the cheetah, an elusive and rare large carnivore. Ecological Solutions and Evidence 6:e70004.

## G.4 Published Book Chapters

There were no book chapters published during this reporting period.

## G.5 Accepted/preprint Papers

Cristescu B, Laincz M, Basto AF, Bornman N, Marker L. Aging cheetahs using gum-line recession and evaluation of expert-based aging techniques. Journal of Zoology.

Gieling R, Schmidt-Küntzel A, Flores-Pineda K, Bailey M, Rooney N, Marker L. Live canine distemper vaccine in African wild dogs effective antibody response of African wild dogs (*Lycaon pictus*) to canine distemper vaccination with a live attenuated vaccine. Journal of Zoo and Wildlife Medicine.

Hofmann T, Verschueren S, Shihepo T, Cristescu B, Anderson N, Le Roux N, Singh S, Neumann S, Balkenhol N, Marker L, Schmidt-Küntzel A. Detection dog survey detects African wild dog presence and a shared marking site. *Authorea.* December 04, 2024.

Kaelin CB, McGowan KA, Trotman JC, Koroma DC, David VA, Menotti-Raymond M, Graff EC, Schmidt-Küntzel A, Oancea E, Barsh GS. Molecular and genetic characterization of sex-linked orange coat color in the domestic cat. bioRxiv 2024 Nov;2024-11.

Maly MA, Roberts RB, Keady MM, Maxwell M, Schmidt-Küntzel A, Marker L, Breen M, Muletz-Wolz CR, Crosier AE. Fecal microbiota are more stable during degradation and more diverse for ex situ cheetahs in Namibia compared to the US. Frontiers in Conservation Science.

Verschueren S, Hofmann T, Kakove M, Cristescu B, Marker L. High carnivore richness despite human pressure and prey depletion in southwestern region of the Kavango-Zambezi Transfrontier Conservation Area. Oryx – The International Journal of Conservation.

Wong A, Eizirik E, Koepfli K-P, de Ferran V, Shihepo T, Lay A, Zumbroich J, Rooney N, Marker L, Schmidt-Küntzel A. Identifying cryptic mammals with non-invasive methods: an effective molecular species identification tool to survey southern African terrestrial carnivores. Ecology and Evolution.

## G.6 Submitted Papers

Bandyopadhyay, K., Cristescu, B., Alfeus, M., Koprowski, J.L., Marker, L. Declining trends in density and biomass, and incipient population halving of African herbivores in a woodland savanna.

Connolly E, Cristescu B, Saed AH, Jama AM, Hirsi M, Abdukadir A & Marker L. Large carnivores and human-wildlife conflict warrant attention in arid regions of the Horn of Africa.

Hauw C, Schmidt-Küntzel A, Basto A, Yabe J, McCann N, Díez-León M, Marker L. Acute lead poisoning from bullet ingestion in a captive cheetah (*Acinonyx jubatus*) in Namibia, A Case Report.

Fabiano EC, Bonatto SL, Schmidt-Küntzel A, O'Brien SJ, Marker LL, Eizirik E. Inferring the historical demography of southern African cheetahs (*Acinonyx jubatus*) using Bayesian analyses of molecular genetic data.

## G.7 MSc. Theses

Bittner, T. (2024) A comparative study of non-invasive survey techniques for detecting cheetah. Georg-August-Universität, Göttingen, Germany

Dhubhghaill, ND. (2024) Feeding and social behaviours in captive cheetahs (*Acinonyx jubatus*). Linköping University, Linköping, Sweden

Inglis, E. (2024) Dynamics of cheetah trafficking and conservation strategies amidst conflict and instability between 2010 and 2023. University of Kent, Kent, UK

Kennis, E. (2024) Spatial ecology and movement decisions of cheetahs. University of Antwerp, Antwerp, Belgium

Kivlahan, M. (2024) Effect of land-use type on the community composition of medium- to large-sized mammals in a woodland savanna of central-eastern Namibia. University of Antwerp, Antwerp, Belgium

Marshall, A. (2024) Wildlife trade in the Horn of Africa: A diagnostic and medical record review, 2018 - 2023. University of Edinburgh, Edinburgh, UK

Sussmann, P. (2024) Evaluating the impact of wild carnivores and vaccine interventions on rabies transmission in the Greater Waterberg Landscape, Namibia. Bristol University, Bristol, UK

Wyles, A. (2024) The illegal pet trafficking of cheetah (*Acinonyx jubatus*) cubs in Somaliland. Bristol University, Bristol, UK

## G.8 Phd. Theses

Gallo, A. (2024) Communicative and perceptual plasticity in non-domesticated species: The influence of human management and experience in captive dolphins and cheetahs. Université de Rennes, Rennes, France.

Verschueren, S. (2024). Strengthening cheetah population monitoring for biodiversity conservation. University of Antwerp, Antwerp, Belgium.

# IV. CONSERVATION

## A. Livestock Guarding Dog Program

### A.1 Program Overview

CCF's Livestock Guarding Dog Program (LGD) continues to be one of the most successful conservation projects to assist farmers with predator conflict in Namibia. To date, CCF has placed 789 (404M, 385F) Livestock Guarding Dogs with farmers throughout Namibia and other parts of Africa. As of 31 December 2024, there were 227 (108M, 119F) dogs alive in the program (Table 7), of which 190 (92M, 98F) are working dogs and 37 (16M, 21F) are retired or housed as pets.

Table 13: Dogs alive as of 31 December 2024. One female in South Africa and one female in Tanzania are now pet dogs.

| Location | M | F | Total |
|---|---|---|---|
| Commercial | 40 | 38 | 78 |
| Commercial (CCF Working) | 7 | 15 | 22 |
| Commercial (CCF Puppies) | 2 | 7 | 9 |
| Communal | 24 | 24 | 48 |
| Emerging Commercial | 10 | 7 | 17 |
| Resettled | 3 | 6 | 9 |
| Freehold | 5 | 0 | 5 |
| Tanzania | 1 | 1 | 2 |
| **Total Working** | **92** | **98** | **190** |
| Retired/Pet (Breeding) | 16 | 21 | 37 |
| **Total dogs alive:** | **108** | **119** | **227** |

CCF began a collaboration with the Ruaha Carnivore Project (RCP) in Tanzania in 2013, which is working to mitigate human-carnivore conflict in the Ruaha area. A large part of this conflict is driven by attacks on livestock, so CCF has provided RCP with a total of 10 (5M, 5F) puppies throughout the years to protect the livestock of Maasai and Barabaig farmers. Although the program has been quite successful, only two (1M, 1F) dogs are still working and one female had to be placed as a pet due to an eye issue that affected her working skills.

CCF has also donated numerous puppies over the years to Cheetah Outreach, another facility that works to save the wild cheetah in South Africa, to help form their own livestock guarding dog program. Since the trial program was so successful in 2005, they also began breeding and providing Anatolian shepherds to South African farmers after the CCF model. The program is key to helping farmers protect their livestock and thus save more cheetahs.

Currently, there are 18 (5M, 13F) intact dogs in CCF's breeding program (Table 8), of which 15 (5M, 11F) reside at CCF as working dogs. Of the two offsite dogs, one (0M, 1F) resides on a commercial farm and one (0M, 1F) resides as a pet in South Africa. Two (1M, 1F) dogs were added and three removed (0M, 3F) from the breeding program in 2024 (Table 8).

- Mia (SB#789), a breeding female was euthanized on 3 May 2024 due to osteosarcoma.
- Lejant (SB#969), a future breeding male was imported from Turkey and arrived at CCF on 7 June 2024.
- Lotus (SB#970), a future breeding female was imported from Turkey and arrived at CCF on 14 June 2024.
- Katira (SB#809), a breeding female was spayed during her emergency C-section on 24 October 2024.
- Tika (SB#709) , a breeding female, was removed from the breeding program on 10 November 2024 due to hip dysplasia and will continue as a working dog at CCF.

*Table 14: Intact livestock guarding dogs as of 31 December 2024.*

| SB# | Dog Name | Born | Sex | Working/Pet | Farm Type | Country |
|---|---|---|---|---|---|---|
| **405** | Pandora | 05/08/2010 | F | Pet | N/A | South Africa |
| **628** | Susie | 11/11/2015 | F | Working (CCF) | Commercial | Namibia |
| **660** | Bolt | 20/05/2016 | M | Working (CCF) | Commercial | Namibia |
| **709** | April | 01/08/2017 | F | Working (CCF) | Commercial | Namibia |
| **751** | Dusty | 8/10/2018 | F | Working | Commercial | Namibia |
| **772** | Koda | 21/04/2019 | F | Working (CCF) | Commercial | Namibia |
| **788** | Bella | 05/01/2019 | F | Working (CCF) | Commercial | Namibia |
| **810** | Ana | 15/06/2020 | F | Working (CCF) | Commercial | Namibia |
| **825** | Dionne | 09/03/2021 | F | Working (CCF) | Commercial | Namibia |
| **833** | Nahanni | 09/07/2021 | F | Working (CCF) | Commercial | Namibia |
| **837** | Oonkondo | 14/05/2021 | M | Working (CCF) | Commercial | Namibia |
| **847** | Bushman | 03/03/2018 | M | Working (CCF) | Commercial | Namibia |
| **881** | Misty-Lee | 01/06/2022 | F | Working (CCF) | Commercial | Namibia |
| **882** | Zeke | 01/06/2022 | M | Working (CCF) | Commercial | Namibia |
| **883** | Catalina | 19/10/2021 | F | Working (CCF) | Commercial | Namibia |
| **884** | Jenny | 13/12/2021 | F | Working (CCF) | Commercial | Namibia |
| **969** | Lejant | 22/12/2023 | M | Working (CCF) | Commercial | Namibia |
| **970** | Lotus | 22/12/2023 | F | Working (CCF) | Commercial | Namibia |

The LGD program is a crucial part of CCF's mission to conserve the wild cheetah and its continuing success is due to the efforts of dedicated CCF staff. Gebhardt Nikanor has worked on placing dogs with farmers for over 10 years. Calum O'Flaherty arrived in June 2019 to manage the program. Simone Reyneke has assisted in managing the program since January 2024.

## A.2 Breeding and Puppy Placements

Since the program's inception, 108 litters have been born at CCF for a total of 872 (418M, 428F, 26U) puppies. From 1 January 2024 to 31 December 2024, a total of 40 (13M, 17F, 10U) puppies were born to CCF's onsite breeding females. Of these 2024 litters, 11 (2M, 1F, 10U) puppies were stillborn, one female succumbed to hypoglycemia and a further female succumbed to internal issues (Table 9). Furthermore, 19 puppies (10M, 9F) were placed on farms which were born to CCF's onsite females.

*Table 15: Puppies born and type of placement as of 31 December 2024 (K = Commercial Farm; C = Communal Farm; EC = Emerging Commercial Farm; R = Re-settled Farm; F = Freehold Farm, P/B = Pet/Breeder; D = Dead; NP = Not Placed; IP = Intact Puppies).*

| **Sire/Dam** | **837/709** | **837/772** | **847/710** | **837/881** | **847/809** | **837/772** | **837/709** | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| **DOB:** | **08/09/23** | **02/10/23** | **11/03/24** | **14/07/24** | **24/10/24** | **19/11/24** | **21/11/24** | **Totals** | | |
| **Sex:** | **M F** | **M F** | **M F** | **M F** | **M F U** | **M F** | **M F** | **M** | **F** | **U** |
| **K** | 3 3 | 3 1 | 1 1 | 2 2 | 0 0 0 | 0 0 | 0 0 | 9 | 7 | 0 |
| **C** | 0 0 | 0 2 | 3 0 | 1 2 | 0 0 0 | 0 0 | 0 0 | 4 | 4 | 0 |
| **EC** | 0 0 | 0 2 | 0 0 | 0 1 | 0 0 0 | 0 0 | 0 0 | 0 | 3 | 0 |
| **R** | 0 0 | 0 2 | 0 0 | 0 0 | 0 0 0 | 0 0 | 0 0 | 0 | 2 | 0 |
| **F** | 0 0 | 0 0 | 0 0 | 1 0 | 0 0 0 | 0 0 | 0 0 | 1 | 0 | 0 |
| **P/B** | 0 0 | 0 0 | 0 0 | 0 0 | 0 0 0 | 0 0 | 0 0 | 0 | 0 | 0 |
| **D** | 1 1 | 0 0 | 1 1 | 0 0 | 0 1 1 0 | 0 0 | 2 2 | 4 | 5 | 1 0 |
| **NP** | 0 0 | 0 0 | 0 0 | 0 0 | 0 0 0 | 2 6 | 0 1 | 2 | 7 | 0 |
| **Total** | **4 4** | **3 7** | **5 2** | **4 5** | **0 1 1 0** | **2 6** | **2 3** | **2 0** | **2 8** | **1 0** |
| **IP** | 0 0 | 0 0 | 0 0 | 0 0 | 0 0 0 | 2 6 | 0 1 | 2 | 7 | 0 |

- April (SB#709), was bred with our Kangal male Oonkondo (SB#837) for the second time in July 2023. She gave birth to 8 (4M, 4F) puppies on 8 September 2023. One female puppy was stillborn (SB#947), and a male succumbed to internal issues on the first day (SB#943). Five of these puppies were placed in November/December 2023 with all of them (2M, 3F) being placed on commercial farms. The remaining puppy (1M, 0F) was placed on a commercial farm in January 2024.
- Koda (SB#772), was bred with our Kangal male Oonkondo (SB#837) for the second time in July 2023. She gave birth to 10 (3M, 7F) healthy puppies on 02 October 2023. These puppies were placed in December 2023 and January 2024. Four of these puppies (3M, 1F) were placed on commercial farms. Two puppies (0M, 2F) were placed on

communal farms, two puppies (0M, 2F) were placed on emerging commercial farms with the final two remaining puppies (0M, 2F) being placed on a resettled farm.

- Ana (SB#810), a mongrel working and breeding dog at CCF, was bred with a mongrel working dog Bushman (SB#847) for the third time and she gave birth on 11 March 2024 to 7 (5M, 2F) puppies. Two puppies (1M, 1F) were still born due to complications during birth. Three of these puppies (3M, 0F) were placed on communal farms with the other two puppies (1M, 1F) being placed on commercial farms in June 2024.
- Misty-Lee (SB#881), was bred with our Kangal male Oonkondo (SB#837) for the first time in May 2024. She gave birth to 9 (4M, 5F) healthy puppies on 14 July 2024. These puppies were placed in October 2024. Four of these puppies (2M, 2F) were placed on commercial farms. Three puppies (1M, 2F) were placed on communal farms, one puppy (0M, 1F) was placed on an emerging commercial farm with the final remaining puppies (1M, 0F) being placed on a freehold farm.
- Katira (SB#809), a mongrel working and breeding dog at CCF, was bred with a mongrel working dog Bushman (SB#847) for the second time and gave birth prematurely on 24 October 2024 to 11 (0M, 1F, 10U) puppies. Ten (0M, 0F, 10U) puppies were still born due to being premature. One (0M, 1F) of the puppies (SB#980) survived until 17 November 2024 before passing away due to hypoglycemia.
- Koda (SB#772), was bred with our Kangal male Oonkondo (SB#837) for the third time in September 2024. She gave birth to 8 (2M, 6F) healthy puppies on 19 November 2024. These puppies will be placed in February 2025.
- April (SB#709), was bred with our Kangal male Oonkondo (SB#837) for the third time in September 2024. She gave birth to 5 (2M, 3F) puppies on 21 November 2024. Three (1M, 2F) puppies were stillborn, and a female succumbed to deformity issues on 23 November 2024 (SB#1003). The remaining puppy (0M, 1F) will be placed on its farm in February 2025.

CCF delivers each puppy to their new farm to ensure the farmer and workers are properly trained on the correct methods of raising a livestock guarding dog and to make sure the puppy settles into their new farm. Each farmer receives packets of information covering the care and training of their livestock guarding dog as well as an Integrated Livestock and Predator Management book to assist with predator-friendly management.

## A.3 Follow-up on Prior Placements and Health Survey

Before any dog is placed on a farm in Namibia, CCF conducts a pre-approval farm visit to ensure that the farm has the facilities and capabilities to ensure the health and wellbeing of the dog and that it can provide the right conditions for the dog to succeed as a livestock guarding dog. After a puppy is placed, CCF performs follow-up visits at 3, 6, and 12 months of age, and then yearly thereafter, to ensure the health and success of each dog. When dogs are found to be unhealthy or not doing their job, they are removed from that specific farm, evaluated, and placed on another farm if deemed appropriate or placed as pets if they are no longer able to work as livestock guarding dogs due to health or behavioural concerns.

From 1 January 2024 to 31 December 2024, CCF staff visited 65 (39M, 26F) dogs, this number includes dogs counted multiple times because they have been visited several times throughout the year to complete their required 3-month, 6-month, and 1-year visits or follow-up visits. Of the 65 dogs, 21 (11M, 10F) received their one-year of age visit. The dogs were vaccinated against rabies and other canine diseases, had an overall health check, and were evaluated on their working success. The following are some outcomes and findings from the visits:

### A.3.1 Dog Deaths

- Lady (SB#306), a working dog on a resettlement farm, died due to old age on 01 January 2021. CCF was only informed in February 2024 as we could never get hold of the farmer.
- Puzzle (SB#528), a working dog on a commercial farm, died due to old age on 01 October 2022. CCF was only informed in February 2024 as we could never get hold of the farmer.
- Goatie (SB#705), a working dog on a commercial farm, died due to snake bite on 01 October 2023. CCF was only informed in February 2024 when organizing a yearly visit.
- Mwangdingi (SB#544), a working dog on an emerging commercial farm, died due to vehicle collision on 01 October 2023. CCF was only informed in February 2024 when organizing a yearly visit.
- Speurder (SB#491), a working dog on a communal farm, died due to old age on 15 November 2023. CCF was only informed in February 2024 when organizing a yearly visit.
- Della (SB#845), a working dog on an emerging commercial farm, died due to a baboon attack on 28 November 2023. CCF was only informed in February 2024 when organizing a yearly visit.
- Hambindo (SB#669), a working dog on a commercial farm, died due to old age on 1 December 2023. CCF was only informed in February 2024 when organizing a yearly visit.
- Akulifa (SB#844), a working dog on a commercial farm, died due to snake bite on 30 January 2024.
- Wolf (SB#497), a pet dog on a resettled farm, was euthanized due to old age on 12 February 2024.
- Burundi (SB#891), a pet dog on a commercial farm, died due to being shot by a neighboring farmer on 04 March 2024.
- Unnamed Dog (SB#966), a female puppy from Ana's (SB#810) litter, was stillborn on 11 March 2024.
- Unnamed Dog (SB#968), a female puppy from Ana's (SB#810) litter, was stillborn on 11 March 2024.
- Whitey (SB#692), a working dog on a commercial farm, died due to an unknown sickness 14 March 2024.

- Swartbek (SB#846), a working dog on a commercial farm, died due to snake bite on 13 April 2024.
- Rex (SB#851), a working dog on a commercial farm was found dead after being trapped in a wire fence 15 April 2024.
- Purple (SB#917), a working dog on a communal farm was euthanized on 24 April 2024 due to a large cancerous tumor being found on the intestines along with excessive liver damage.
- Mia (SB#789), a breeding dog at CCF, was euthanized due to an osteosarcoma on 03 May 2024. See section, Dog Health, for more information.
- Kunene (SB#637), a working dog on a commercial farm, was euthanised due to severe squamous cell carcinoma on 31 May 2024.
- Rocks (SB#749), a working dog on a commercial farm, died due to snake bite on 10 June 2024.
- Bobby (SB#604), a working dog on an emerging commercial farm, was confiscated on 12 May 2024 due to poor body conditions. On further investigation, he was found to have a hemangiosarcoma and was thus euthanized on 25 June 2024.
- Hage (SB#699), a working dog on a communal farm, died due to unknown causes on 30 June 2024. CCF was informed the dog was stolen and/or assumed dead in 2019.
- Stella (SB#704), a working dog on a commercial farm died due to a snake bite on 24 July 2024.
- Anika (SB#957), a working dog on a communal farm died on 07 September 2024 due to aortic aneurysm.
- Boethos /Leeu (SB#539), a working dog on a commercial farm was euthanised due to poisoning on 13 September 2024.
- Unnamed Dogs (SB#981-SB#990), unsexed puppies from Katira's (SB#809) litter, were stillborn on 24 October 2024.
- Unnamed Dog (SB#980), a female puppy from Katira's (SB#809) litter, died on 17 November 2024 due to hypoglycemia.
- Unnamed Dogs (SB#999, SB#1000, SB#1003), three (2M, 1F) puppies from April's (SB#702) litter, were stillborn between 21 November 2024 and 23 November 2024.
- Unnamed Dog (SB#1002), a female puppy from April's (SB#702) litter, died on 23 November 2024 due to not being fully developed internally.
- Wolf (SB #816), a working dog on a commercial farm died due to a warthog on 26 November 2024.
- Repet (SB#507), a retired breeding dog on a commercial farm was found dead in the field on 28 November 2024. Necropsy results showed blunt force trauma and congestive heart failure was the cause of death.
- Shaera (SB#659), a working dog on a commercial farm died due to the rupturing of a tumour on 29 December 2024. See section, Dog Health, for more information.

### A.3.2 Rehomed Dogs

- Cheetah (SB#679), a working dog on a communal farm was returned on 06 March 2023, because the farmer could no longer financially afford to keep the dog. He was rehomed as a working dog on an emerging commercial farm on 12 May 2023. Six months later he was returned on 17 November 2023 due to a severe allergic reaction. Furthermore, it was found on arrival that he had severe joint problems and thus retired from the working program. He was rehomed as a pet dog on a resettled farm on 16 February 2024.
- Leila (SB#894), a working dog on a commercial farm, was returned to CCF on 23 June 2023 due to behavioral issues caused by her habituation. She was re-evaluated with the CCF herd and returned to the same farm on 29 August 2023. However, on 24 February 2024, she was returned again for the same reason. After another evaluation with CCF's herd, she was placed as a working dog on a commercial farm on 16 May 2024. On 12 August 2024, she was returned yet again, this time due to poor work ethic. Following a final evaluation with CCF's herd, Leila was placed as a working dog on a communal farm on 12 December 2024
- Burundi (SB#891), a working dog on a commercial farm was brought in on 05 July 2023 due to a broken leg. Unfortunately, the leg did not heal and was thus removed. She was rehomed as a pet dog on 29 January 2024.
- Pinocchio (SB#958), a rescue dog who the SPCA had confiscated from a farm in Otjiwarongo due to severe neglect was brought into CCF after a period of quarantine on 04 September 2023. He was evaluated with the CCF herd and then rehomed as a working dog on an emerging commercial farm on 22 March 2024.
- Cleo (SB#959), a rescue dog who the SPCA had confiscated from a farm in Otjiwarongo due to severe neglect was brought into CCF after a period of quarantine on 04 September 2023. She was evaluated with CCF's herd to be rehomed as a working dog. However, on evaluation it was decided she could no longer be a working dog and was rehomed as a pet dog on 30 April 2024.
- Hans (SB#748), a working dog on a commercial farm, was returned on 19 October 2023 due to poor work ethic. During this time, it was also discovered that she showed early signs of SCC. She was evaluated with the CCF herd and rehomed as a working dog on another commercial farm on 25 January 2024. However, on 11 February 2024, she was returned again for the same reason—poor work ethic. Upon re-evaluation with CCF's herd, it was determined that she was no longer suitable as a working dog. Consequently, she was rehomed as a pet on 23 June 2024. Unfortunately, she was returned once more on 28 October 2024 due to escaping. Hans was then rehomed again on 16 December 2024.
- Piet (SB#737), a working dog on a commercial farm was returned on 02 November 2023 due to poor work ethic. He was evaluated with the CCF herd and then rehomed as a working dog on a commercial farm on 9 March 2024. He was returned again on 01

October 2024 due to the same reason. After another evaluation with CCF's herd, he was placed as a working dog on a communal farm on 13 December 2024.

- Bobby (SB#944), a working dog on a commercial farm was returned on 08 February 2024 due to the farmer selling all his livestock. She was rehomed the same day on a commercial farm as a working dog.
- Unnamed Dog (SB#956), a working dog on an emerging commercial farm was confiscated on 09 February 2024 due to the farmer failing to pay. She was rehomed on a commercial farm as a working dog on 11 February 2024.
- Rex (SB#848), a working dog on an emerging commercial farm was returned on the 21 February 2024 due to poor work ethic. He was evaluated with the CCF herd and then rehomed on the same farm as a working dog on 15 April 2024.
- Joel (SB#869), a working dog on a commercial farm was returned on 02 March 2024 due to hip problems. He was evaluated by our clinic team and no issues could be found. He was evaluated with CCF's herd and was rehomed as a working dog on a resettled farm on 05 August 2024.
- Susie (SB#628), a breeding at CCF, was retired from the breeding program due to her age and was rehomed as a pet dog with Dr Laurie Marker on 8 April 2024.
- Blom (SB#783), a working dog on a resettled farm, was returned to CCF on 04 July 2024 due to poor work ethic. She was evaluated with CCF's herd and then placed as a working dog on a communal farm on 15 July 2024.
- Roy (SB#871), a working dog on a commercial farm was returned on 30 May 2024 due to poor work ethic. He was evaluated with the CCF herd and then rehomed as a working dog on a commercial farm on 25 July 2024. He was returned again on 02 August 2024due to the same reason. After another evaluation with CCF's herd, he was placed as a working dog on a resettled farm on 11 November 2024.
- Murise (SB#774), a working dog on a communal farm was returned to CCF on 07 August 2024 due to the farmer facing financial difficulty and not being able to feed the dog. He was evaluated with CCF's herd and was rehomed as a working dog on a commercial farm on 15 December 2024.
- Oubaas (SB#922), an onsite working dog was retired as a pet due to hip dysplasia on 07 September 2024. He returned to CCF on 13 September 2024 due to biting one of the owner's other pet dogs. He was then rehomed on 11 December 2024.
- Leo (SB#898), a working dog on a commercial farm was returned to CCF on 20 September 2024 due to poor work ethic. He was then evaluated with the CCF herd and was rehomed as a working dog on a commercial farm on 23 September 2024.
- Snefel/Tiger (SB#655), a working dog on an emerging commercial farm was returned to CCF on 18 October 2024 due to poor work ethic. She was evaluated with CCF's herd and then placed as a working dog on a communal on 14 December 2024.

Other than routine vaccinations, CCF provides de-worming tablets, veterinary supplies for minor injuries, and topical antiparasitic agents that are available from donations. The medical supplies ensure that the dogs' health is a priority. Dog food is offered for purchase at a discounted rate to the farmers to encourage that a correct diet is followed consistently. The dogs' working success has been correlated with good care from the owner. Many farmers are part-time and thus their attention is divided between their farm and other business activities, however, this is not a problem if they have good herders who assist with livestock and dog care. It is important that the owners are in touch with the developmental phases of their dogs so that problems can be dealt with immediately as they occur, preventing bad habits from developing and the dog failing as a result.

## A.4 Dog Health

All CCF's Anatolian Shepherd and Kangal dogs, as well as the scat-detection dogs, are enrolled in a preventative medicine program. Every month, a broad-spectrum anti-parasite product for endo-parasites is administered. The product is rotated continually to help prevent the development of drug resistance. Every four weeks an ectoparasite prevention product is applied topically to prevent fleas, ticks, and mites. Each dog receives vaccinations annually against canine distemper virus, canine parvovirus, adenovirus, parainfluenza virus, and rabies virus. Each month every dog is weighed to make sure they are at healthy body weight. The following are some of the special cases CCF's veterinary team dealt with during this reporting period:

- Mia (SB#789), an onsite breeding female, was brought into the clinic on 5 January 2024 as a new large tumor was discovered on her right hind quarters. A FNA was performed and samples were taken on the new tumor and degenerative neutrophils were found. The tumor continued to grow as it was closely monitored for any more abnormalities to the point it was found to have spread throughout her body. The decision was taken to euthanize her on 3 May 2024. Necropsy results to follow.

- Oubaas (SB#922), an onsite working male, was brought into the clinic on 8 January 2024 due to an open wound on his hind leg. The wound was cleaned and stitches were placed. He was given a course of antibiotics and anti-inflammatories with the wound being cleaned daily with acriflavine and closely monitored. He was returned to kraal once the wound had healed.

- Hans (SB#748), an onsite working female, was brought into the clinic on 12 January 2024 due to a limp on her left front leg. She was given a course of anti-inflammatories for three days. She has since recovered and has been placed as a pet dog.

- Misty-Lee (SB#881), an onsite working/breeding female, was taken to the clinic on 15 January 2024 as she received an injury to her right paw due to fighting another female.

The wound was cleaned and wound spray applied. She was given a course of antibiotics and anti-inflammatories and was returned to the kraal.

- Bolt (SB#660), an onsite breeding male, was brought into the clinic on 15 January 2024 due mucus blood being found in his scat. A thorough examination was completed of him with his temperature and a blood smear taken. The results were inconclusive and he was closely monitored for the next few days. The mucus did not return.

- Leila (SB#894), a working female on a commercial farm was brought into the clinic 24 January 2024 due to a baboon attack. She sustained multiple bite wounds on her back and hind leg. She received a course of antibiotics, anti-inflammatories and pain medication. Her wounds were stitched and drains were placed where the vets deemed necessary. She was continuously monitored and wounds checked daily and F10 ointment applied. She was rehomed on 16 May 2024.

- Cleo (SB#959), an onsite working female, was brought into the clinic on 26 January 2024 due blood being found in her scat. A thorough examination was completed of her with her temperature and a blood smear taken. The results were inconclusive, however, received a course of protexin and the blood did not reoccur.

- Hans (SB#748), an onsite working female, was brought into the clinic on 12 February 2024 due to a limp on her left front leg. She was given a course of anti-inflammatories for three days. She has since recovered and has been placed as a pet dog.

- Omakaa (SB#954), a working female on a communal farm was brought into the clinic on 20 February 2024 for tick bite wounds. The clinic team diagnosed her with tick bite fever as well as tick bite necrosis. She was given a course of doxycycline and anti-inflammatories. Acriflavine and F10 ointment were also applied to the wounds. On 28 February 2024 the clinic team discovered more wounds. On 5 March 2024 she was sedated due to some of the wounds showing signs of infection. Thereafter, she was closely monitored until wounds were fully healed. She returned to her farm on 25 March 2024.

- Ana (SB#810), an onsite breeding female was brought into the clinic on 11 March 2025 due to complications during whelping. The clinic decided an emergency C-section was required due to the mal-positioning of one of the puppies. Five puppies were saved; however, two puppies were still born. Ana was then stitched up and given a course of anti-biotics and anti-inflammatories and monitored closely at the clinic. She got her stitches removed on 27 March 2024 and returned to the kraal.

- Ana (SB#810), an onsite breeding female was in the clinic on 26 March 2024, when a wound was noticed on her abdomen. The clinic team took samples and the results were inconclusive. Wound spray was applied two times a day for five days. The wound had healed by 7 April 2024.

- Katira (SB#809), an onsite working/breeding female, was rushed to the clinic on 3 April 2024 due to a severe neck swelling after getting bit by a puff adder while out working. She received fluids straight away and four vials of anti-venom and then was placed on a treatment of prednisone (a steroidal anti-inflammatory) and antibiotics. She completed her recovery in the clinic and returned back to the kraal on 7 April 2024.

- Meisie (SB#726), a working female on a communal farm was brought into the clinic on 16 April 2024 with a swollen hind left leg. An X-ray was performed where the clinic team confirmed that she had an incomplete spiral fracture on her hind left tibia. She was given a course of pain medication before being taken to Windhoek on 26 April to place a pin and wire to correct her fracture. She was kept in the clinic to reduce movement on her leg. Once healed she was moved to the kraal on 17 June 2024 where she is being monitored before the pin is removed and can be sent back to her farm. On 30 July 2024 she returned to Windhoek where the pin was removed and has since made a full recovery and returned to her farm.

- Purple (SB#917), a working female on a communal farm was brought into the clinic on 19 April 2024 due to her abdomen being distended. The clinic team performed an ultrasound and found a lot of fluid in her abdomen. Three liters of fluid was drained from the abdomen. However, the fluid returned and a further 1.5 litres was drained the next day. On 24 April 2024 the clinic team identified a large tumor at the base of the mesentery and severe liver. The decision was taken to euthanize her on the 24 April 2024 due to the severity of the damage. Necropsy results to follow.

- Misty-Lee (SB#881), an onsite breeding and working female was brought into the clinic on 21 April 2024, due to a severe limp on her front right leg. The clinic completed an X-ray and found no signs of any breaks or fractures. She was given a course of anti-inflammatories for 10 days and was closely monitored. The clinic team has recommended she be retired from working.

- Miracle (SB#836) , an onsite working female from Jan Helpman was brought into the clinic on 6 May 2024 due to an open wound on her rib cage. The clinic team cleaned the wound, placed a drain and stitched the wound on 7 May 2024. She was kept in the clinic to be monitored daily and was given a course of antibiotics and anti-inflammatories as well as F10 ointment being applied as needed. The clinic team placed a new drain on 8 May 2024, as she removed the first drain. She has since made a full recovery and returned home on 29 May 2024.

- Bets (SB#879), an onsite working female from Jan Helpman, was brought into the clinic on 6 May 2024, with a wound on her forehead, due to a fight with a warthog. The clinic team cleaned the wound and applied stitches. She was kept in the clinic to be

monitored daily and was given a course of antibiotics and anti-inflammatories as well as F10 ointment being applied as needed. She has since made a full recovery.

- Thomas (SB#861), an offsite working male on a communal farm was brought into the clinic on 27 May 2024 due to a limp on his right hind leg. It was confirmed that he was in a collision with a car on 25 May 2024. The clinic team performed an X-ray on him on 29 May 2024. No broken bones or fractures were seen. He was treated with a course of anti-inflammatories for 3 days. He was closely monitored and has since made a full recovery. He was returned to his farm on 6 June 2024.

- Ugab (SB#710), an offsite working male on a commercial farm was brought into the clinic on 28 May 2024 due to a tick wound on his fore-head, near his eye. The wound was cleaned with F10 and received a course of eye ointment. The wound healed quickly and returned to his farm on 5 June 2024.

- Bolt (SB#660), an onsite breeding male, was brought into the clinic on 6 June 2024 due to two large hotspots on his rib cage. He was treated with wound spray until the wound was dry and has since made a full recovery.

- Lisboa-Bella (SB#788), an onsite breeding female was brought into the clinic on 7 June 2024, due to a severe lack of appetite for three days and a hotspot on her back. A complete work up was completed and it was discovered that she had gastric dilate (GDV). She was immediately decompressed; however the decision to perform a gastropexy was taken due to no improvement. She remained in the clinic where she was closely monitored and given a course of antibiotics and anti-inflammatories as well as a diet change. She made a full recovery and returned to the kraal on 16 June 2024.

- Wolf (SB#816), a working male on a communal farm was brought into the clinic on 18 June 2024 due to being attacked by a baboon. He sustained a wound on his right hind leg and during sedation it was found he had a necrotic tick bite on the back of his head. The leg wound was cleaned and the clinic team applied stitches. He was given a course of pain medication, antibiotics and anti-inflammatories. After the wound is fully healed he will return to his farm. 2024.

- Bobby (SB#604), an offsite working male on an emerging commercial farm was confiscated on the 12 May 2024 due to poor body condition. Upon return, a blood smear was completed during a full body work up and it was confirmed his body does not make enough red blood cells. On 26 June 2024 he was rushed to the clinic as he was lethargic and had a severe lack of appetite. The clinic team completed X-rays, however, the results were inconclusive and the decision was made to move him to the clinic in Otjiwarongo for further consultation. It was found that he was bleeding internally from a ruptured spleen, caused by a hemangiosarcoma. The decision was taken to euthanize him on the 26 June 2024 due to the cancer. Necropsy results to follow.

- Bolt (SB#660), an onsite breeding male, was brought into the clinic on 10 July 2024 due to four large hotspots on his hind legs. The hotspots were cleaned and treated with wound spray until the wound was dry and has since made a full recovery.

- Roy (SB#871), an offsite male, was brought into the clinic on 18 July 2024 due to limping on his front right leg. He was given a course of pain medication and anti-inflammatories. He has since made a full recovery and returned back to the kraal where he was reevaluated with CCF's herd.

- Boethos/Leeu (SB#539), an offsite pet male on a commercial farm, was brought into the clinic on 12 August 2024 due to exasperated breathing. A complete work up was completed and an X-Ray was taken. It was found he had pneumonia as well as a lump on his lung. He was given a course of antibiotics and anti-inflammatories and an improvement was seen. However, he was humanely euthanised on 13 September 2024 due to being poisoned.

- Bossa(SB#932), an offsite male on a commercial farm, was brought into the clinic on 01 September 2024 due to an open wound on his hind left leg. The farmer reported that the dog had been hit by a car. The wound was cleaned, stitched and a drain placed. An X-ray was performed the next day, which confirmed that no bone was broken. The wound was closely monitored with daily cleaning. Once the wound had closed, the leg was then treated with wound spray until it was dry. The leg was still swollen on 14 October 2024 and thus a course of antibiotics was given for 5 days. Since then he has made a full recovery and returned to his farm on 23 October 2024.

- Anika (SB#957), an offsite female on a communal farm was brought into the clinic due to a severely swollen front left leg on 04 September 2024. The clinic team performed an X-ray and no diagnosis could be made. She was given an anti-inflammatory and was closely monitored. The next day she was found unresponsive, CPR was attempted but she was already dead. A necropsy was completed on 07 September 2024 and confirmed she died due to an aoristic aneurysm.

- Bushman (SB#847), an onsite breeding male was brought into the clinic on 08 September 2024 due to blood coming from his prepuce. His prepuce was flushed and cleaned and he returned to the kraal the same day.

- Jenny(SB#884), an onsite breeding female, was brought into the clinic on 15 September 2024 due to limping on her front left leg. The clinic team completed an X-ray and no issues were seen. She was given a course of antibiotics and anti-inflammatories and has since made a full recovery.

- Shaera(SB#659), an offsite female on a commercial farm was brought to the clinic on 25 September 2024 due to an abscess on the right side of her face. The abscess was

drained and cleaned. She was given a course of antibiotics and anti-inflammatories and has since made a full recovery and returned to her farm.

- Bolt (SB#660), an onsite breeding male, was brought into the clinic on 01 October 2024 due to hotspots on his hind legs. The hotspots were cleaned and treated with wound spray until the wound was dry and has since made a full recovery.

- Ringo (SB#514), an offsite working male on a commercial farm was brought into the clinic on 11 October 2024 due to an abscess on his neck. The abscess was drained and cleaned on 16 October 2024. Germicidal barrier (F10) ointment was applied on his wound regularly. He has since made a full recovery and returned home on 24 October 2024.

- Repet (SB#507), an offsite working female on a commercial farm was brought into the clinic on 17 October 2024 due to limping on her front right leg. X-rays were performed the same day and no broken bones or fractures were seen. She was treated with a course of anti-inflammatories for 3 days. She was closely monitored and has since made full recovery. She returned to her farm on 17 October 2024.

- Katira (SB#809), an onsite breeding female, was brought to the clinic on 24 October 2024 after prematurely going into labor. A C-section was deemed necessary as the puppies were being delivered stillborn. Due to premature placental detachment and the presence of deceased puppies inside her for an unknown duration, it was decided to spay her to prevent septicemia. During surgery, she experienced significant blood loss, necessitating a transfusion from her sister, Ana (SB#810). Post-surgery, Katira was treated with a course of pain relief, anti-inflammatory medication, antibiotics, and supplements to aid blood regeneration and recovery. Unfortunately, she sustained extensive burn wounds on her back from the heating pad used during the surgery. These wounds are being cleaned regularly and treated with acriflavine. She is under close observation, and her recovery is ongoing.

- Tika (SB#718), an onsite breeding female, was brought to the clinic for spaying on 10 November 2024 due to hip dysplasia. During the surgery, two lumps were discovered between her teats, identified as early-stage cystic endometritis hyperplasia, and were removed. She was then treated with a course of pain relief and antibiotics. However, due to her position during the operation, she developed knuckling of her left hind paw caused by nerve damage. Tika was closely monitored and underwent physiotherapy. By 16 November 2024, she had made a full recovery.

- Whitey (SB#960), an offsite working male on a commercial farm was brought into the clinic on 21st November due to no weight bearing on his back left leg which was also swollen. An X-ray was completed which identified a chipped bone in his knee. The knee was then stabilised and he was given a course of pain medication and anti-inflammatories. He has since made a full recovery and returned to his farm.

- Jenny(SB#884), an onsite breeding female was brought into the clinic on 16 November 2024 due to limping on her front left leg. The clinic team performed an X-ray and confirmed that the problem was in her paw (in-between her toes). She received a course of anti-inflammatories and was closely monitored. She has since fully recovered.

- Ana (SB#878), an onsite working female, was taken to the clinic on 23 November 2024 as she received wounds to her front legs and neck due to fighting another female. The wounds were cleaned and wound spray applied. She was given a course of antibiotics and anti-inflammatories and was returned to the kraal and has since made a full recovery.

- Misty-Lee (SB#881), an onsite working/breeding female, was taken to the clinic on 23 November 2024 as she received wounds to her front legs due to fighting another female. The wounds were cleaned and wound spray applied. She was given a course of antibiotics and anti-inflammatories and was returned to the kraal and has since made a full recovery.

- Shaera (SB#659), an offsite working female on a commercial farm, was brought to the clinic on 27 December 2024 with irregular breathing, a lump on the left side of her chest, and a lack of appetite. The clinic team conducted X-rays, which revealed fluid in her lungs. She was treated with a course of anti-inflammatory medication, and a drain was placed to remove the fluid from her chest cavity. Despite close monitoring and slight improvement, Shaera ultimately passed away on 29 December 2024. A necropsy was performed, revealing a large tumor on her costal arch and a chest cavity filled with blood. Samples of the tumor were sent for analysis. The results confirmed that the tumor had ruptured, leading to internal bleeding. The tumor was identified as a spindle cell sarcoma.

### A.4.1 Squamous Cell Carcinoma (SCC)

Each dog that comes into CCF with SCC begins treatment. Each dog first receives a biopsy of the tongue which is taken to confirm the damage is caused by SCC. While under sedation, a prednisolone injection will be inserted into the tongue along the lines of damage. The prednisolone will help decrease inflammation and reduce pain but only lasts for one month. Monthly biopsies and injections will be completed to continue pain treatment and see if there is any cellular change. All dogs will be fed a soaked pelleted diet to ease eating. The condition of the dog and tongue will be monitored from month to month. CCF is working on finding a suitable chemotherapy drug to help treat any confirmed SCC cases.

- Fisch (SB#583), a working dog on a communal farm, had experienced problems with eating in the past, and we had encouraged the farmer to pre-soak his pelleted food, but his condition worsened. The farmer asked that the dog be returned and looked at on 09 November 2019 as he felt we could better provide for him. He was started on meloxicam tablets to reduce pain and inflammation although his case is moderately severe as he is missing the sides of his tongue. Fisch underwent blood draws in July and

again in October to compare vitals, which were fine. He started on oral PetCam treatment which appeared to be better for him as it increased his appetite. He was brought into CCF again on 15 May 2021 and completed his first biopsy and treatment. It was discovered that his inflammation had since reduced, and his body condition had improved. On 09 October 2021 another biopsy was taken and a resection was performed as well. On 06 March 2022 a follow-up was conducted, which showed no further signs of SCC; however a new biopsy was taken. He was treated with Depo-Medrol and sent back to his farm. A further follow-up was conducted on 10 November 2022; again it showed no further signs of SCC. He was given Depo-Medrol and sent back to his farm. Another follow-up was conducted on 16 June 2023; again it showed no further signs of SCC. He was given Depo-Medrol and sent back to his farm. Another follow-up was conducted on 10 September 2024; again it showed no further signs of SCC. He was given Depo-Medrol and sent back to his farm.

- Repet (SB#507), a resident working dog, had been experiencing some trouble eating since March 2018 and would return from working with a limp. She was prescribed Meloxicam to help with inflammation for a few months and taken off it once she had a litter in July 2018. In December 2018 her tongue started to look sore as she was throwing her head back to eat pellets properly, she started back on meloxicam and received it until the decision was made to try a tongue treatment with Methylprednisolone and biopsy procedure on 6 March 2019. Since then she had not been prescribed medication, but underwent her second treatment on 28 October 2020, as her tongue had worsened. Two biopsies were taken for a diagnosis. On 24 July 2021 she had another biopsy done, and 4cm of her tongue was removed due to the cancer spreading. Her follow-up tongue evaluation on 8 October 2021 showed the tongue is doing well, and Depo-Medrol was injected. Her tongue was checked again in December, which showed it had not significantly spread. On 19 June 2022 a follow-up was conducted, which showed no further signs of SCC; however a new biopsy was taken. She was treated with Depo-Medrol and sent back to her farm. A further follow-up was conducted on 10 November 2022; again it showed no further signs of SCC. She was given Depo-Medrol and sent back to her farm. Another follow-up was conducted on 20 June 2023; again it showed no further signs of SCC. She was given Depo-Medrol and sent back to her farm. Another follow-up was conducted on 17 October 2024; again it showed no further signs of SCC. She was given Depo-Medrol and sent back to her farm.
- Bamse (SB#804), a working dog on a communal farm, appeared to show signs of SCC on 14 December 2022 and was subsequently brought in. He was taken to the clinic for treatment on 15 January 2023 and three samples were taken for diagnosis. During his biopsy it was determined that a partial resection of the tongue was necessary. He was given Depo-Medrol and returned to his farm a few days later. On 05 September 2024 a follow-up was conducted, which showed no further signs of SCC. He was treated with Depo-Medrol and sent back to his farm.
- Murize (SB#768), a working dog on a communal farm, had experienced problems with eating in the past, and we had encouraged the farmer to pre-soak his pelleted food, but his condition worsened. On 27 January 2023 he was subsequently brought in. He was taken straight to the clinic for treatment and three samples were taken for diagnosis.

During his biopsy it was determined that a partial resection of the tongue was necessary. He was given Depo-Medrol and returned to his farm a few days later.

- Wagter (SB#582), a working dog on a communal farm, appeared to show signs of SCC on 05 February 2023 and was subsequently brought in. He was taken to the clinic for treatment on 28 February 2023 and three samples were taken for diagnosis. During his biopsy it was determined that a partial resection of the tongue was not necessary. He was given Depo-Medrol and returned to his farm a few days later.
- Wagter (SB#783), a working dog on a communal farm, was confiscated from her farm on the 14 June 2023. On arrival at CCF, a health evaluation was completed which appeared to show signs of SCC on her tongue. She was taken to the clinic for treatment on 26 June 2023 and three samples were taken for diagnosis. During her biopsy it was determined that a partial resection of the tongue was not necessary. She was given Depo-Medrol and is currently being reevaluated with CCF's herd.
- Cheetah (SB#673) a working dog on a communal farm, was brought into the clinic from her farm on 04 July 2023 due to a leopard scratch on her head. On arrival at CCF, a further health evaluation was completed which appeared to show signs of SCC on her tongue. She underwent treatment on 05 July 2023 and three samples were taken for diagnosis. During her biopsy it was determined that a partial resection of the tongue was not necessary. She was given Depo-Medrol and returned to her farm on the 17 July 2023.
- Happy (SB#743), a working dog on a commercial farm, appeared to show signs of SCC was subsequently brought in. On 03 October 2023 he was brought in. He was taken to the clinic for treatment on 04 October 2023 and three samples were taken for diagnosis. During his biopsy it was determined that a partial resection of the tongue was necessary. He was given Depo-Medrol and returned to his farm on the 16 October 2023.
- Rocks (SB#749), a working dog on a commercial farm, appeared to show signs of SCC and was subsequently brought in. On 08 October 2023 he was brought in. He was taken to the clinic for treatment the same day and three samples were taken for diagnosis. During his biopsy it was determined that a partial resection of the tongue was not necessary. He was given Depo-Medrol and returned to his farm on the 17 October 2023.
- Hans (SB#748), a working dog on a commercial farm, was returned on 19 October 2023 due to poor work ethic. On arrival at CCF, a health evaluation was completed which appeared to show signs of SCC on her tongue. She was taken to the clinic for treatment on 30 October 2023 and three samples were taken for diagnosis. During her biopsy it was determined that a partial resection of the tongue was not necessary. She was given Depo-Medrol and was placed as a pet 16 December 2024.
- Piet (SB#737), a working dog on a commercial farm was returned on 02 November 2023 due to poor work ethic. On arrival at CCF, a health evaluation was completed which appeared to show signs of SCC on his tongue. He was taken to the clinic for treatment on 03 November 2023 and three samples were taken for diagnosis. During his biopsy it was determined that a partial resection of the tongue was not necessary. He was then given Depo-Medrol. On 01 October 2024 a follow-up was conducted and

it was determined that a partial resection of the tongue was necessary. After which he was treated with Depo-Medrol and rehomed on 13 December 2024.

- Hendrick (SB#611), a pet dog, appeared to show signs of SCC and was subsequently brought in. On 17 January 2024 he was brought in. He was taken to the clinic for treatment on 18 January 2024 and three samples were taken for diagnosis. During his biopsy it was determined that a partial resection of the tongue was necessary. He was given Depo-Medrol and returned home a couple of days later.
- Ringo (SB#514), a working dog on a resettled farm, was confiscated from his farm on 15 May 2024 due to poor condition. On arrival at CCF, a health evaluation was completed which appeared to show signs of SCC on his tongue. He was taken to the clinic for treatment on 19 May 2024 and three samples were taken for diagnosis. During his biopsy it was determined that a partial resection of the tongue was necessary. He was given Depo-Medrol and is currently being reevaluated with CCF's herd. On 11 October 2024 a follow-up was conducted, which showed no further signs of SCC. He was treated with Depo-Medrol and sent back to his farm.
- Shaera (SB#659), a working dog on a commercial farm came into CCF due to an abscess on her face 25 September 2024 On arrival at CCF, a health evaluation was completed which appeared to show signs of SCC on his tongue. He was taken to the clinic for treatment on 29 September 2024 and three samples were taken for diagnosis. During her biopsy it was determined that a partial resection of the tongue was necessary. She was given Depo-Medrol and returned to her farm the next day.
- Murise (SB#774), a working dog on a communal farm was returned to CCF on 07 August 2024 due to the farmer facing financial difficulty and not being able to feed the dog. On arrival at CCF, a health evaluation was completed which appeared to show signs of SCC on his tongue. He was taken to the clinic for treatment on 01 October 2024 and three samples were taken for diagnosis. During his biopsy it was determined that a partial resection of the tongue was necessary. He was given Depo-Medrol and rehomed on a new farm on 15 December 2024.

# B. Model Farm

CCF's farm provides the opportunity to practice and experiment with optimal methods of livestock and non-lethal farm management practices, especially acting as a showcase model of success. The cattle, goat, and sheep herds at CCF continue to increase and selected herds have been used during various Farmer Training programs. Table 15 provides an overview of CCF's livestock.

*Table 16: CCF livestock from 1 January 2024 to 31 December 2024.*

| | Stock Start | Born | Purchased | Sold | Died | Slaughtered/ CCF use | Stolen | Stock End |
|---|---|---|---|---|---|---|---|---|
| **Cattle** | **641** | 165 | 0 | 120 | 8 | 3 | | **675** |
| **Boer Goats** | **94** | 21 | 0 | 2 | 11 | 0 | 0 | **102** |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| **Damara Sheep** | **117** | 75 | 1 | 14 | 14 | 0 | 0 | **165** |
| **Dairy Goats** | **202** | 88 | 0 | 46 | 36 | 0 | 0 | **208** |
| **Donkeys** | **98** | 16 | 75 | 0 | 9 | 75 | 0 | **105** |
| **Horses** | **19** | 2 | 32 | 0 | 4 | 39 | 0 | **10** |

CCF's Farm Manager, Johan Britz; Large Stock Assistant Manager, Bessie Simon; Small Stock Manager, Calum O'Flaherty, Small Stock Assistant Manager, Kundai Makoni; Small Stock Herder, Armas Shanika, and the animal health team carry out proper management to maintain the general health and welfare of the animals.

During this period, CCF farm staff continued to work on fence repairs and basic farm maintenance. Work also continued on firebreaks, road maintenance, provision of water as well as weed control and eradication of alien species.

## B.1 Cattle

CCF cattle are managed in a 100% predator-friendly environment. A cow-calf system is in place and weaners are sold before one year of age based on market conditions. Factors such as severe bush encroachment and theft continue to be a challenge.

Normal management is done in coordination with nature, therefore mating seasons differ yearly but generally, it is from January to the end of April. This period has been extended due to a shortage of bulls. When necessary, CCF utilizes six to eight bulls that are on loan. Pregnancy determination is normally done in July or August. Dehorning and castration are done as needed during the calving season. During this reporting period, we received average to above-average rainfall with good grazing availability.

By the end of December 2020, CCF had 500 cattle compared to 420 at the end of 2019. Total cattle production for 2020 included 135 calves born (75M, 60F), and 51 sold (36M, 1 cow, 15F) (Table 10). CCF also rents grazing land to two farmers for their cattle (approximately 700 herd total), thus providing an extra income.

### B.1.1 Vaccination Program

CCF firmly believes in farming with animals adapted to the Namibian climate with a strong natural resistance to most diseases. As such, unnecessary vaccinations are avoided to minimize costs and reduce stress on the animals. Compulsory brucellosis and anthrax vaccinations are administered and other vaccinations are done purely as needed. Periodical internal and external parasite control is also in place.

### B.1.2 Other

Since cattle fall under the Fanmeat scheme of Namibia, CCF must ensure compliance with the European Union (EU) and the Fanmeat scheme. Fanmeat stands for Farm Assured Namibian Meat, which is a standard for meat production, specifically for cattle, that involves the traceability, animal health and welfare, record keeping, and animal movement in Namibia.

The CCF cattle recordkeeping and data have passed inspection every year, and our cattle operation is mentioned by the Directorate of Veterinary Services as an excellent standard when it comes to the fulfilment of these requirements. Good results were also obtained during the annual weaner auctions.

## B.2 Small Stock

Goats and sheep are an essential part of CCF's LSGD program as the puppies must be raised amongst the goats and sheep in order for them to form a close bond with the livestock. As part of CCF's Model Farm, dogs and small stock are used during farmer-training program as a method to raise livestock around predators without using lethal methods to prevent predation.

In addition to the 28 adult livestock guarding dogs mentioned in the previous section, as of 31 December 2024, the kraal contains 208 (55M, 153F) Dairy goats, 102 (17M, 85F) Boer goats, and 165 (27M, 138F) Damara sheep.

Between 1 January 2024 and 31 December 2024, 59 small stock were sold so far, 48 dairy goats (2M, 46F), 2 Boer goats (0M, 2F), and 14 Damara sheep (2M, 12F), bringing in a total of N$135,692.00.

### B.2.1 Boer Goats

The Boer goat herd stood at 102 (17M, 85F) at the end of this reporting period, up from 94 at the end of 2023.

14 Boer goats gave birth from 1 January 2024 and 31 December 2024 to a total of 21 kids (11M, 10F) (Table 11). This number was reduced due to results experienced during breeding soundness exams. Where UNK is placed for the Dam and Sire, it is because the Dam has lost her tag since breeding, a tag has been replaced since but we cannot 100% confirm it is the correct tag.

*Table 17: Boer goat births from 1 January 2024 to 31 December 2024.*

| SB # | Tag # | Sex | Date of Birth | Dam | Sire | Alive or Dead |
|---|---|---|---|---|---|---|
| **938** | 1-24 | F | 10-Feb-24 | 35-16 | CCF Buck | Alive |
| **939** | 2-24 | M | 15-Feb-24 | 33-15 | CCF Buck | Alive |
| **940** | 3-24 | M | 19-Feb-24 | UNK | CCF Buck | Dead |
| **941** | 4-24 | F | 19-Feb-24 | UNK | CCF Buck | Alive |
| **942** | 5-24 | M | 28-Feb-24 | 86-17 | CCF Buck | Alive |
| **943** | 6-24 | M | 29-Feb-24 | 9-12 | CCF Buck | Alive |
| **944** | 7-24 | F | 01-Mar-24 | 35-18 | CCF Buck | Alive |
| **945** | 8-24 | M | 12-Mar-24 | UNK | CCF Buck | Dead |
| **946** | 9-24 | F | 12-Mar-24 | UNK | CCF Buck | Alive |
| **947** | 10-24 | M | 17-Mar-24 | 52-18 | CCF Buck | Alive |
| **948** | 11-24 | M | 18-Mar-24 | 35-21 | Paul's Buck | Alive |
| **949** | 12-24 | M | 18-Mar-24 | 35-21 | Paul's Buck | Alive |
| **950** | 13-24 | F | 18-Mar-24 | 27-21 | Paul's Buck | Dead |

| | | | | | | |
|---|---|---|---|---|---|---|
| **951** | 14-24 | M | 20-Mar-24 | 11-21 | Paul's Buck | Alive |
| **952** | 15-24 | M | 20-Mar-24 | 11-21 | Paul's Buck | Alive |
| **953** | 16-24 | F | 21-Mar-24 | 11-22 | Paul's Buck | Alive |
| **954** | 17-24 | F | 23-Mar-24 | TL-M | CCF Buck | Alive |
| **955** | 18-24 | F | 23-Mar-24 | 35-17 | CCF Buck | Alive |
| **956** | 19-24 | M | 06-Oct-24 | 26-18 | UNK | Alive |
| **957** | 20-24 | F | 06-Oct-24 | 26-18 | UNK | Alive |
| **958** | 21-24 | F | 06-Oct-24 | 26-18 | UNK | Alive |

Between 1 January 2024 and 31 December 2024, 11 Boer goats (4M, 7F) died due to causes listed in Table 12.

*Table 18: Boer goat deaths from 1 January 2024 to 31 December 2024*

| SB # | Tag # | Sex | Date of Death | Cause of Death |
|---|---|---|---|---|
| **940** | 3-24 | M | 19-Feb-24 | Stillborn |
| **384** | 25-15 | F | 23-Feb-24 | Unknown |
| **945** | 8-24 | F | 04-Apr-24 | Pulpy Kidney |
| **951** | 13-24 | F | 07-Jul-24 | Blunt Force Trauma |
| **947** | 10-24 | M | 10-Jul-24 | Leopard Attack |
| **No Tag** | N/A | M | 29-Oct-24 | Unknown |
| **907** | 4-23 | F | 24-Nov-24 | Rumen Acidosis |
| **949** | 12-24 | M | 26-Nov-24 | Anaemia |
| **No Tag** | N/A | F | 29-Nov-24 | Poisonous Plant |
| **No Tag** | N/A | F | 04-Dec-24 | Parasites |
| **632** | 18-18 | F | 30-Dec-24 | Poisonous Plant |

CCF's Boer goats are managed for meat production and castrated males and old or inferior bucks are sold to farmers. Between 1 January 2024 and 31 December 2024, 2 goats (0M, 2F) were sold, amounting to N$2,484.00. Table13 provides an overview of CCF's Boer goat sales.

*Table 19: Boer goat sales from 1 January 2024 to 31 December 2024 (M = male, F = female, W = weather).*

| SB # | Tag # | Sex | Date of Birth | Date of Sale | Price |
|---|---|---|---|---|---|
| **666** | 52-18 | F | 08-Aug-24 | 13-Sep-24 | N$1,104.00 |
| **UNK** | No Tag | F | N/A | 28-Nov-24 | N$1,380.00 |
| | | | | **Total:** | **N$2,484.00** |

CCF's strategy is to keep improving the quality of its Boer herd by bringing in quality bucks and continuing to improve the selection of animals for breeding. This will provide more income from the sales of these goats, as some can be sold as breeding animals versus only meat.

## B.2.2 Damara Sheep

The Damara sheep herd stood at 165 (27 M, 138F) at the end of this reporting period, up from 117 at the end of 2023.

Out of the 108 Damara Sheep that were bred in August 2023, 55 gave birth from January to February 2024 to a total of 73 (38M, 35F) lambs. Two sheep were accidentally bred during herding and gave birth to two (0M, 2F) lambs, one in April and one in June. In addition to these, 130 Damara Sheep were bred in August 2024, three gave birth at the end of December 2024 to a total of 4 (2M, 2F) lambs, making a total of 79 (41M, 39F) lambs born in 2024 (40M, 39F) (Table 14). If UNK is placed for the Dam and Sire, it is because the Dam has lost her tag since breeding, a tag has been replaced since but we cannot 100% confirm it is the correct tag.

***Table 20:*** *Damara sheep births from 1 January 2024 to 31 December 2024.*

| SB # | Tag # | Sex | Date of Birth | Dam | Sire | Dead/Alive |
|---|---|---|---|---|---|---|
| **823** | 01-24 | F | 02-Jan-24 | 19-18 | Meatmaster 2 | Alive |
| **824** | 02-24 | F | 02-Jan-24 | 19-18 | Meatmaster 2 | Alive |
| **825** | 03-24 | M | 03-Jan-24 | 77-21 | Meatmaster 3 | Alive |
| **826** | 04-24 | F | 03-Jan-24 | 18-21 | Meatmaster 3 | Alive |
| **827** | 05-24 | F | 03-Jan-24 | 18-21 | Meatmaster 3 | Alive |
| **828** | 06-24 | M | 04-Jan-24 | 79-21 | Meatmaster 3 | Alive |
| **829** | 07-24 | M | 05-Jan-24 | 71-22 | Meatmaster 3 | Alive |
| **830** | 08-24 | M | 06-Jan-24 | 28-19 | Meatmaster 2 | Alive |
| **831** | 09-24 | F | 06-Jan-24 | 28-19 | Meatmaster 2 | Alive |
| **832** | 10-24 | M | 06-Jan-24 | 11-20 | Meatmaster 2 | Alive |
| **833** | 11-24 | F | 06-Jan-24 | 11-20 | Meatmaster 2 | Alive |
| **834** | 12-24 | F | 06-Jan-24 | 11-20 | Meatmaster 2 | Alive |
| **835** | 13-24 | M | 06-Jan-24 | 30-19 | Meatmaster 2 | Alive |
| **836** | 14-24 | M | 07-Jan-24 | 25-20 | Meatmaster 2 | Dead |
| **837** | 15-24 | F | 07-Jan-24 | 25-20 | Meatmaster 2 | Alive |
| **838** | 16-24 | F | 07-Jan-24 | 6-20 | Meatmaster 2 | Alive |
| **839** | 17-24 | F | 07-Jan-24 | 6-20 | Meatmaster 2 | Dead |
| **840** | 18-24 | M | 08-Jan-24 | 18-20 | Meatmaster 2 | Alive |
| **841** | 19-24 | M | 08-Jan-24 | 19-20 | Meatmaster 2 | Alive |
| **842** | 20-24 | F | 08-Jan-24 | 19-20 | Meatmaster 2 | Alive |
| **843** | 21-24 | F | 08-Jan-24 | 25-19 | Meatmaster 2 | Alive |
| **844** | 22-24 | M | 09-Jan-24 | 60-21 | Meatmaster 3 | Alive |
| **845** | 23-24 | M | 10-Jan-24 | 21-20 | Meatmaster 2 | Alive |
| **846** | 24-24 | F | 10-Jan-24 | 21-20 | Meatmaster 2 | Alive |
| **847** | 25-24 | M | 11-Jan-24 | 67-22 | Meatmaster 3 | Alive |
| **848** | 26-24 | M | 11-Jan-24 | 5-19 | Meatmaster 2 | Alive |
| **849** | 27-24 | F | 11-Jan-24 | 5-19 | Meatmaster 2 | Alive |
| **850** | 28-24 | F | 11-Jan-24 | 12-19 | Meatmaster 2 | Dead |
| **851** | 29-24 | M | 11-Jan-24 | 39-21 | Meatmaster 3 | Dead |

| | | | | | | |
|---|---|---|---|---|---|---|
| **852** | 30-24 | F | 11-Jan-24 | 63-21 | Meatmaster 3 | Alive |
| **853** | 31-24 | M | 11-Jan-24 | 1-22 | Meatmaster 3 | Alive |
| **854** | 32-24 | M | 14-Jan-24 | 8-21 | Meatmaster 3 | Alive |
| **855** | 33-24 | M | 14-Jan-24 | 6-20 | Meatmaster 2 | Alive |
| **856** | 34-24 | M | 14-Jan-24 | 6-20 | Meatmaster 2 | Alive |
| **857** | 35-24 | M | 15-Jan-24 | 39-20 | Meatmaster 2 | Alive |
| **858** | 36-24 | F | 17-Jan-24 | 47-18 | Meatmaster 2 | Alive |
| **859** | 37-24 | F | 17-Jan-24 | 47-18 | Meatmaster 2 | Alive |
| **860** | 38-24 | F | 18-Jan-24 | 35-21 | Meatmaster 3 | Alive |
| **861** | 39-24 | M | 18-Jan-24 | 29-20 | Meatmaster 2 | Alive |
| **862** | 40-24 | F | 18-Jan-24 | 29-20 | Meatmaster 2 | Alive |
| **863** | 41-24 | M | 18-Jan-24 | 62-21 | Meatmaster 3 | Alive |
| **864** | 42-24 | M | 18-Jan-24 | 66-21 | Meatmaster 3 | Alive |
| **865** | 43-24 | F | 18-Jan-24 | 55-18 | Meatmaster 2 | Alive |
| **866** | 44-24 | M | 18-Jan-24 | 16-22 | Meatmaster 3 | Alive |
| **867** | 45-24 | F | 18-Jan-24 | 53-18 | Meatmaster 2 | Alive |
| **868** | 46-24 | M | 18-Jan-24 | 53-18 | Meatmaster 2 | Dead |
| **869** | 47-24 | F | 18-Jan-24 | 53-18 | Meatmaster 2 | Alive |
| **870** | 48-24 | M | 22-Jan-24 | 24-20 | Meatmaster 2 | Alive |
| **871** | 49-24 | M | 22-Jan-24 | 24-20 | Meatmaster 2 | Alive |
| **872** | 50-24 | F | 22-Jan-24 | 12-21 | Meatmaster 3 | Alive |
| **873** | 51-24 | M | 22-Jan-24 | 36-18 | Meatmaster 2 | Alive |
| **874** | 52-24 | F | 22-Jan-24 | 36-18 | Meatmaster 2 | Alive |
| **875** | 53-24 | F | 22-Jan-24 | 3-19 | Meatmaster 2 | Alive |
| **876** | 54-24 | M | 22-Jan-24 | 31-21 | Meatmaster 3 | Alive |
| **877** | 55-24 | M | 23-Jan-24 | 52-16 | Meatmaster 2 | Alive |
| **878** | 56-24 | M | 23-Jan-24 | 7-19 | Meatmaster 2 | Alive |
| **879** | 57-24 | F | 23-Jan-24 | 31-18 | Meatmaster 2 | Alive |
| **880** | 58-24 | F | 23-Jan-24 | 5-22 | Meatmaster 3 | Dead |
| **881** | 59-24 | M | 23-Jan-24 | 23-19 | Meatmaster 2 | Alive |
| **882** | 60-24 | F | 23-Jan-24 | 22-19 | Meatmaster 2 | Alive |
| **883** | 61-24 | M | 23-Jan-24 | 5-20 | Meatmaster 2 | Alive |
| **884** | 62-24 | M | 24-Jan-24 | 19-19 | Meatmaster 2 | Alive |
| **885** | 63-24 | M | 24-Jan-24 | 10-22 | Meatmaster 3 | Alive |
| **886** | 64-24 | M | 24-Jan-24 | 52-18 | Meatmaster 2 | Dead |
| **887** | 65-24 | M | 24-Jan-24 | 52-18 | Meatmaster 2 | Dead |
| **888** | 66-24 | F | 25-Jan-24 | 13-19 | Meatmaster 2 | Alive |
| **889** | 67-24 | F | 27-Jan-24 | 34-19 | Meatmaster 2 | Alive |
| **890** | 68-24 | F | 27-Jan-24 | 16-19 | Meatmaster 2 | Alive |
| **891** | 69-24 | F | 28-Jan-24 | 26-19 | Meatmaster 2 | Alive |
| **892** | 70-24 | F | 29-Jan-24 | 1-20 | Meatmaster 2 | Alive |
| **893** | 71-24 | M | 04-Feb-24 | 17-22 | Meatmaster 3 | Dead |

| | | | | | | |
|---|---|---|---|---|---|---|
| **894** | 72-24 | F | 04-Feb-24 | UNK | Meatmaster 3 | Alive |
| **895** | 73-24 | M | 06-Feb-24 | 60-22 | Meatmaster 3 | Alive |
| **896** | 74-24 | F | 09-Apr-24 | 1-22 | Meatmaster 3 | Alive |
| **897** | 75-24 | F | 07-Jun-24 | 74-21 | Meatmaster 3 | Alive |
| **898** | 1-25 | M | 29-Dec-24 | 48-23 | Meatmaster 3 | Alive |
| **899** | 2-25 | F | 29-Dec-24 | 28-23 | Meatmaster 3 | Alive |
| **901** | 3-25 | M | 30-Dec-24 | 6-19 | Meatmaster 2 | Alive |
| **902** | 4-25 | F | 30-Dec-24 | 6-19 | Meatmaster 2 | Alive |

Between 1 January 2024 and 31 December 2024, 14 sheep (10M, 4F) died due to causes listed in Table 15.

*Table 21: Damara sheep deaths from 1 January 2024 to 31 December 2024*

| SB # | Tag # | Sex | Date of Death | Cause of Death |
|---|---|---|---|---|
| **839** | 17-24 | F | 07-Jan-24 | Stillborn |
| **851** | 29-24 | M | 14-Jan-24 | Hypoglycaemia |
| **880** | 58-24 | F | 25-Jan-24 | Unknown |
| **887** | 65-24 | M | 26-Jan-24 | Pneumonia |
| **836** | 14-24 | M | 21-Apr-24 | Unknown |
| **850** | 28-24 | F | 28-May-24 | Unknown |
| **886** | 64-24 | M | 04-Jun-24 | Culled |
| **893** | 71-24 | M | 21-Jun-24 | Internal Parasites |
| **868** | 46-24 | M | 24-Jun-24 | Pneumonia |
| **619** | Meatmaster 2 | M | 16-Aug-24 | Pulpy Kidney |
| **854** | 32-24 | M | 19-Aug-24 | Pneumonia |
| **844** | 22-24 | M | 14-Sep-24 | Pneumonia |
| **N/A** | No Tag | F | 29-Oct-24 | Poisonous Plant |
| **857** | 35-24 | M | 05-Nov-24 | Blunt Force Trauma |

CCF's Damara sheep are managed for meat production and castrated males and old or inferior bucks are sold to farmers. Between 1 January 2024 and 31 December 2024, 14 sheep (2M,12F) were sold, amounting to N$16,208.00. Table 16 provides an overview of CCF's Damara sheep sales.

***Table 22**: Damara sheep sales from 1 January 2024 to 31 December 2024 (M = male, F = female, W = weather).*

| SB # | Tag # | Sex | Date of Birth | Date of Sale | Price |
|---|---|---|---|---|---|
| **844** | 22-24 | M | 09-Jan-24 | 25-Jun-24 | N$900.00 |
| **854** | 32-24 | M | 14-Jan-24 | 25-Jun-24 | N$900.00 |
| **787** | 13-23 | F | 19-May-23 | 01-Oct-24 | N$1600.00 |
| **783** | 09-23 | F | 18-May-23 | 01-Oct-24 | N$1600.00 |
| **780** | 06-23 | F | 17-May-23 | 01-Oct-24 | N$1600.00 |

| | | | | | |
|---|---|---|---|---|---|
| **766** | 02-23 | F | 13-May-23 | 01-Oct-24 | N$1600.00 |
| **468** | 19-18 | F | 13-Jan-18 | 22-Nov-24 | N$1,040.00 |
| **499** | 31-18 | F | 29-Jan-18 | 22-Nov-24 | N$962.00 |
| **518** | 47-18 | F | 19-Jun-18 | 22-Nov-24 | N$962.00 |
| **886** | 52-18 | F | 21-Mar-18 | 22-Nov-24 | N$1,014.00 |
| **887** | 53-18 | F | 21-Mar-18 | 22-Nov-24 | N$1,014.00 |
| **526** | 55-18 | F | 21-Mar-18 | 22-Nov-24 | N$1,040.00 |
| **538** | 06-19 | F | 27-Mar-19 | 22-Nov-24 | N$962.00 |
| **535** | 03-19 | F | 26-Mar-19 | 22-Nov-24 | N$1,014.00 |
| | | | | **Total** | **N$16,208.00** |

CCF's strategy is to keep improving on the quality of its Damara sheep herd by bringing in quality rams and continuing to improve the selection of animals for breeding. This will provide more income from the sales of these sheep, as some can be sold as breeding animals versus only meat. One new Damara Sheep Ram (SB#897) was purchased on 2 August 2024 by assistant farms manager Paul Visser in agreement he could use him for breeding. He is a 2-year-old male who was born on 1 January 2023. He was purchased from AGRA auctions in Otjiwarongo and underwent a period of quarantine upon arrival.

### B.2.3 Dairy Goats

The dairy goat herd stood at 208 (55M, 153F) at the end of this reporting period, up from 202 at the end of 2023.

The dairy goat is managed in such a way that when half of them are being bred, the other half are lactating to keep a continuous production of milk. However, over the past year and a half during breeding soundness exams we have experienced results which have caused a reduction in breeding. In March and April 2024, 51 does were bred with two breeding males; Leo (SB#590) and Raphael (SB#801). Fifteen of the 41 does breed fell pregnant and gave birth to a total 64 (33M, 26F, 5U) kids between July and September 2024. Another, 46 does were bred between July and August 2024 with the same breeding males; Leo (SB#590) and Raphael (SB#801). Thirteen of the 46 dogs fell pregnant and gave birth to a total 24 kids (12M, 12F) in December 2024 (Table 17).

*Table 23: Breeding and kidding months for 42 Dairy does from 1 January 2024 to 31 December 2024. (Abo = aborted, NP = not pregnant).*

| Goat | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Abbi** | | | Bred | | | | | Kid | | | | |
| **Ablonia** | | | | | | | Bred | | | | | Kid |
| **Albertine** | | | Bred | | | | | Kid | | | | |
| **Alice 2** | | | | | | | | Bred | | | | NP |
| **Amanda** | | | Bred | | | | | NP | | | | |

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **Amaryllis** | | | | | | | | Bred | | | | NP |
| **Amelia 2** | | | Bred | | | | | Kid | | | | |
| **Ana** | | | | | | | | Bred | | | | NP |
| **Anabeb** | | | Bred | | | | | Kid | | | | |
| **Anahi** | | | Bred | | | | Kid | | | | | |
| **Autumn** | | | | | | | Bred | | | | | NP |
| **Azalea** | | | | | | | | Bred | | | | NP |
| **Bambi** | | | | Bred | | | | Kid | | | | |
| **Barolo** | | | | | | | Bred | | | | | Kid |
| **Beryl** | | | | | | | | Bred | | | | NP |
| **Bianca 2** | | | | Bred | | | | | NP | | | |
| **Blackfoot** | | | | Bred | | | | Kid | | | | |
| **Carolina** | | | | | | | | Bred | | | | NP |
| **Cecilia** | | | Bred | | | | | Kid | | | | |
| **Cherry** | | | Bred | | | | Kid | | | | | |
| **Chianti** | | | | Bred | | | | | NP | | | |
| **Chive** | | | | | | | Bred | | | | | Kid |
| **Chloe** | | | | | | | Bred | | | | | NP |
| **Cosmos** | | | | | | | | Bred | | | | NP |
| **Crystal** | | | | | | | Bred | | | | | NP |
| **Cypress** | | | Bred | | | | | Kid | | | | |
| **Devon** | | | Bred | | | | Kid | | | | | |
| **Dominique** | | | | | | | Bred | | | | | NP |
| **Eileen** | | | | Bred | | | | Kid | | | | |
| **Fransina** | | | Bred | | | | | Kid | | | | |
| **Frida** | | | Bred | | | | | Kid | | | | |
| **Gabela** | | | | Bred | | | | Kid | | | | |
| **Gardenia** | | | Bred | | | | | Kid | | | | |
| **Gize** | | | | | | | | Bred | | | | NP |
| **Hazel** | | | | | | | | Bred | | | | NP |
| **Helena** | | | | | | | Bred | | | | | Kid |
| **Hennessy** | | | | | | | | Bred | | | | |
| **Indigo** | | | | | | | | Bred | | | | NP |
| **Isabel** | | | | | | | | Bred | | | | NP |
| **Johanna** | | | Bred | | | | | Kid | | | | |

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **Kaarina** | | | | | | | | Bred | | | | Kid |
| **Kalahari** | | | | | | | | Bred | | | Kid | |
| **Kariba** | | | Bred | | | | | Kid | | | | |
| **Kaylee** | | | | Bred | | | | | NP | | | |
| **Kendall** | | | Bred | | | | | Kid | | | | |
| **Karina** | | | | | | | Bred | | | | | Kid |
| **Khenzi** | | | | | | | Bred | | | | | Kid |
| **Kunene** | | | | Bred | | | | Kid | | | | |
| **Kwando** | | | Bred | | | | | Kid | | | | |
| **Lauren** | | | Bred | | | | | Kid | | | | |
| **Lazuli** | | | Bred | | | | Kid | | | | | |
| **Lilac** | | | | | | | | Bred | | | Kid | |
| **Lillibet** | | | Bred | | | | | Kid | | | | |
| **Lisa** | | | Bred | | | | | Kid | | | | |
| **Lola** | | | | | | | | Bred | | | | NP |
| **Lotus** | | | | | | | Bred | | | | | NP |
| **Lunda** | | | | Bred | | | | | NP | | | |
| **Madeira** | | | | | | | | Bred | | | | NP |
| **Malachite** | | | Bred | | | | | Kid | | | | |
| **Marble** | | | Bred | | | | | NP | | | | |
| **Maria** | | | | | | | | Bred | | | | NP |
| **Mariental** | | | Bred | | | | | | NP | | | |
| **Marsala** | | | | | | | | Bred | | | | NP |
| **Martha** | | | | | | | | Bred | | | | NP |
| **Meredith** | | | | | | | Bred | | | | | Kid |
| **Modesta** | | | | | | | | Bred | | | | NP |
| **Molly** | | | Bred | | | | | Kid | | | | |
| **Monique** | | | Bred | | | | | | NP | | | |
| **Moonstone** | | | Bred | | | | | Kid | | | | |
| **Nala** | | | Bred | | | | | | NP | | | |
| **Nakia** | | | | Bred | | | | Kid | | | | |
| **Natasha** | | | | | | | | Bred | | | | NP |
| **Ngoma** | | | | | | | | Bred | | | | Kid |
| **Olive** | | | Bred | | | | | Kid | | | | |
| **Oshana** | | | Bred | | | | | Kid | | | | |

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **Pansy** | | | Bred | | | | | Kid | | | | |
| **Phillippa** | | | | Bred | | | Kid | | | | | |
| **Posey** | | | | | | | | Bred | | | | NP |
| **Purros** | | | Bred | | | | | Kid | | | | |
| **Quartz** | | | | | | | Bred | | | | | Kid |
| **Robin** | | | | | | | Bred | | | | Kid | |
| **Rue** | | | Bred | | | | | | NP | | | |
| **Sage** | | | Bred | | | | | Kid | | | | |
| **Shila** | | | | | | | | Bred | | | | NP |
| **Shiraz** | | | | | | | | Bred | | | | NP |
| **Sienna** | | | | | | | | Bred | | | | NP |
| **Simone** | | | | | | | Bred | | | | Kid | |
| **Stella** | | | Bred | | | | | Kid | | | | |
| **Taylor** | | | | Bred | | | | Kid | | | | |
| **Tanaka** | | | | | | | | Bred | | | | NP |
| **Topaz 2** | | | | | | | Bred | | | | | NP |
| **Trendy** | | | | | | | | Bred | | | | NP |
| **Uutapi** | | | | Bred | | | | Kid | | | | |
| **Veneto** | | | Bred | | | | | Kid | | | | |
| **Vistoria** | | | Bred | | | | | | NP | | | |
| **Zara** | | | | | | | | Bred | | | | NP |
| **Zemba** | | | Bred | | | | | Kid | | | | |

A total of 88 (45M, 38F, 5U) dairy kids were born during 2024 (Table 18).

*Table 24: Dairy Goats births from 1 January 2024 to 31 December 2024 (M = male, F = female, U = unknown)*

| SB# | Name | Sex | Date of Birth | Dam | Sire | Alive or Dead |
|---|---|---|---|---|---|---|
| 973 | 4973 | U | 26 -Jun-24 | Phillippa | Raphael/Leo | Dead |
| 974 | 4974 | U | 13-Jul-24 | Devon | Raphael/Leo | Dead |
| 975 | 4975 | U | 14-Jul-24 | Anahi | Raphael/Leo | Dead |
| 976 | 4976 | U | 18-Jul-24 | Cherry | Raphael/Leo | Dead |
| 977 | 4977 | U | 17-Jul-24 | Lazuli | Raphael | Dead |
| 978 | 4978 | M | 07-Aug-24 | Gardenia | Raphael | Dead |
| 979 | Begonia | F | 07-Aug-24 | Gardenia | Raphael | Alive |
| 980 | 4980 | M | 08-Aug-24 | Johanna | Raphael | Alive |
| 981 | Puye | F | 12-Aug-24 | Stella | Raphael | Alive |
| 982 | Salome | F | 12-Aug-24 | Stella | Raphael | Alive |

| 983 | Tess | F | 12-Aug-24 | Stella | Raphael | Alive |
|---|---|---|---|---|---|---|
| 984 | Tania | F | 12-Aug-24 | Stella | Raphael | Alive |
| 985 | 4985 | F | 12-Aug-24 | Zemba | Raphael | Dead |
| 986 | 4985 | M | 12-Aug-24 | Zemba | Raphael | Alive |
| 987 | 4987 | M | 07-Aug-24 | Lilibet | Raphael | Alive |
| 988 | 4988 | M | 07-Aug-24 | Lilibet | Raphael | Alive |
| 989 | 4989 | M | 07-Aug-24 | Veneto | Raphael | Alive |
| 990 | Pinacolada | F | 07-Aug-24 | Veneto | Raphael | Alive |
| 991 | Martini | F | 07-Aug-24 | Veneto | Raphael | Alive |
| 992 | 4992 | M | 07-Aug-24 | Uutapi | Raphael/Leo | Alive |
| 993 | 4993 | M | 07-Aug-24 | Amelia 2 | Raphael | Alive |
| 994 | Majesty | F | 07-Aug-24 | Amelia 2 | Raphael | Alive |
| 995 | 4995 | M | 07-Aug-24 | Cypress | Raphael | Alive |
| 996 | 4996 | M | 13-Aug-24 | Purros | Raphael | Alive |
| 997 | Utuseb | F | 13-Aug-24 | Purros | Raphael | Alive |
| 998 | Basil | F | 13-Aug-24 | Olive | Raphael/Leo | Alive |
| 999 | 4999 | M | 13-Aug-24 | Taylor | Raphael/Leo | Alive |
| 1000 | 4000 | M | 13-Aug-24 | Fransina | Raphael | Alive |
| 1001 | Christy | F | 13-Aug-24 | Fransina | Raphael | Alive |
| 1002 | 4002 | M | 14-Aug-24 | Lauren | Raphael | Alive |
| 1003 | Donovan | F | 15-Aug-24 | Eileen | Raphael/Leo | Alive |
| 1004 | 4004 | M | 15-Aug-24 | Kendall | Raphael | Alive |
| 1005 | 4005 | M | 15-Aug-24 | Kendall | Raphael | Dead |
| 1006 | 4006 | M | 15-Aug-24 | Molly | Raphael | Alive |
| 1007 | 4007 | M | 15-Aug-24 | Molly | Raphael | Alive |
| 1008 | Bester | F | 15-Aug-24 | Albertina | Raphael/Leo | Alive |
| 1009 | 4009 | M | 15-Aug-24 | Kariba | Raphael | Dead |
| 1010 | Liambezi | F | 15-Aug-24 | Kariba | Raphael | Alive |
| 1011 | 4011 | M | 16-Aug-24 | Oshana | Raphael | Alive |
| 1012 | 4012 | M | 16-Aug-24 | Lisa | Raphael | Alive |
| 1013 | Gobabeb | F | 16-Aug-24 | Anabeb | Raphael/Leo | Alive |
| 1014 | 4014 | M | 16-Aug-24 | Gabela | Raphael | Alive |
| 1015 | 4015 | M | 16-Aug-24 | Gabela | Raphael | Alive |
| 1016 | 4016 | M | 16-Aug-24 | Gabela | Raphael | Alive |
| 1017 | Nile | F | 17-Aug-24 | Kwando | Raphael | Alive |
| 1018 | 4018 | M | 17-Aug-24 | Moonstone | Leo | Alive |
| 1019 | 4019 | M | 17-Aug-24 | Pansy | Raphael | Alive |
| 1020 | Bamboo | F | 17-Aug-24 | Pansy | Raphael | Alive |
| 1021 | 4021 | M | 18-Aug-24 | Vistoria | Leo | Alive |

| 1022 | Pandu | F | 18-Aug-24 | Vistoria | Leo | Alive |
|---|---|---|---|---|---|---|
| 1023 | 4023 | M | 19-Aug-24 | Abbi | Raphael | Alive |
| 1024 | 4024 | M | 19-Aug-24 | Abbi | Raphael | Alive |
| 1025 | Nelao | F | 20-Aug-24 | Sage | Raphael | Alive |
| 1026 | Sapphire | F | 20-Aug-24 | Malachite | Raphael | Alive |
| 1027 | Ivory | F | 20-Aug-24 | Malachite | Raphael | Alive |
| 1028 | 4028 | M | 22-Aug-24 | Frida | Raphael | Alive |
| 1029 | 4029 | M | 22-Aug-24 | Cecilia | Raphael | Dead |
| 1030 | 4030 | M | 22-Aug-24 | Cecilia | Raphael | Dead |
| 1031 | 4031 | M | 28-Aug-24 | Blackfoot | Raphael | Dead |
| 1032 | 4032 | M | 28-Aug-24 | Blackfoot | Raphael | Dead |
| 1033 | 4033 | F | 29-Aug-24 | Nakia | Raphael/Leo | Dead |
| 1034 | 4034 | F | 30-Aug-24 | Kunene 2 | Raphael | Dead |
| 1035 | Onesi | F | 30-Aug-24 | Kunene 2 | Raphael | Alive |
| 1036 | Jessie | F | 09-Sep-24 | Bambi | Raphael | Alive |
| 1037 | 4037 | M | 29-Nov-24 | Simone | Raphael | Alive |
| 1038 | 4038 | F | 29-Nov-24 | Simone | Raphael | Alive |
| 1039 | 4039 | M | 02-Dec-24 | Kalahari | Raphael | Alive |
| 1040 | 4040 | M | 02-Dec-24 | Lilac | Raphael/Leo | Alive |
| 1041 | 4041 | F | 02-Dec-24 | Lilac | Raphael/Leo | Alive |
| 1042 | 4042 | M | 02-Dec-24 | Robin | Raphael | Dead |
| 1043 | 4043 | F | 02-Dec-24 | Robin | Raphael | Alive |
| 1044 | 4044 | M | 03-Dec-24 | Ablonia | Raphael | Alive |
| 1045 | 4045 | M | 03-Dec-24 | Ablonia | Raphael | Dead |
| 1046 | 4046 | M | 05-Dec-24 | Khenzi | Raphael | Alive |
| 1047 | 4047 | F | 05-Dec-24 | Khenzi | Raphael | Alive |
| 1048 | 4048 | F | 05-Dec-24 | Chive | Raphael | Alive |
| 1049 | 4049 | F | 05-Dec-24 | Chive | Raphael | Alive |
| 1050 | 4050 | F | 06-Dec-24 | Helena | Raphael | Alive |
| 1051 | 4051 | M | 11-Dec-24 | Meredith | Raphael | Alive |
| 1052 | 4052 | F | 11-Dec-24 | Meredith | Raphael | Dead |
| 1053 | 4053 | F | 11-Dec-24 | Meredith | Raphael | Alive |
| 1054 | 4054 | M | 18-Dec-24 | Quartz | Raphael | Alive |
| 1055 | 4055 | F | 18-Dec-24 | Quartz | Raphael | Alive |
| 1056 | 4056 | M | 24-Dec-24 | Barolo | Raphael | Alive |
| 1057 | 4057 | F | 24-Dec-24 | Barolo | Raphael | Alive |
| 1058 | 4058 | M | 30-Dec-24 | Ngoma | Raphael | Alive |
| 1059 | 4059 | F | 30-Dec-24 | Ngoma | Raphael | Alive |
| 1060 | 4060 | M | 31-Dec-24 | Kaarina | Raphael | Alive |

Between 1 January 2024 and 31 December 2024, 36 (5M, 21F, 10U) Dairy goats died to causes listed in Table 19.

*Table 25: Dairy goats that died from 1 January 2024 to 31 December 2024.*

| SB # | Name | Sex | Date of Death | Cause of Death |
|---|---|---|---|---|
| 682 | Thistle | F | 05-Jan-24 | Leopard Attack |
| 946 | 3946 | F | 26-Jan-24 | Paraketosis |
| 960 | 3960 | F | 25 -Apr-24 | Internal Parasites |
| 922 | Mahi | F | 11-May-24 | Internal Parasites |
| 964 | 3964 | M | 16-May-24 | Internal Parasites |
| 973 | 4973 | U | 26-Jun-24 | Stillborn |
| UNK | Simon | M | 08-Jul-24 | Anaemia |
| 974 | 4974 | U | 13-Jul-24 | Stillborn |
| 975 | 4976 | U | 14-Jul-24 | Stillborn |
| 978 | 4978 | U | 08-Aug-24 | Stillborn |
| 985 | 4985 | F | 14-Aug-24 | Hypoglycaemia |
| 367 | Zemba | F | 14-Aug-24 | Septicymeia |
| 986 | 4986 | M | 14-Aug-24 | Ingested Plastic |
| 991 | 4991 | F | 14-Aug-24 | Hypoglycaemia |
| 1005 | 4005 | M | 15-Aug-24 | Neurological disorder |
| 976 | 4776 | U | 17-Aug-24 | Stillborn |
| 977 | 4977 | U | 19-Aug-24 | Stillborn |
| 1009 | 4009 | U | 22-Aug-24 | Stillborn |
| 1029 | 4029 | U | 22-Aug-24 | Stillborn |
| 1030 | 4030 | U | 22-Aug-24 | Stillborn |
| 1031 | 4031 | F | 29-Aug-24 | Stillborn |
| 1010 | 4010 | F | 01-Sep-24 | Internal Parasites |
| 1035 | 4035 | F | 08-Sep-24 | Hypoglycaemia |
| 998 | 4998 | F | 08-Sep-24 | Hypoglycaemia |
| 1032 | 4032 | F | 09-Sep-24 | Hypoglycaemia |
| 1033 | 4033 | U | 09-Sep-24 | Stillborn |
| 510 | Crystal | F | 29-Sep-24 | Pulpy Kidney |
| 805 | Skylar | F | 04-Nov-24 | Internal Parasites |

| | | | | |
|---|---|---|---|---|
| **434** | Chloe | F | 13-Nov-24 | Plant Intoxication |
| **1045** | 4045 | F | 03-Dec-24 | Bloat |
| **732** | Modesta | F | 06-Dec-24 | Ingestion of Bag |
| **279** | Halali | F | 09-Dec-24 | Plant Intoxication |
| **869** | Amarula | F | 09-Dec-24 | Cachexia |
| **917** | Cubango | F | 12-Dec-24 | UNK |
| **307** | Rose | F | 24-Dec-24 | Rumen Acidosis |
| **1042** | 4042 | M | 24 -Dec-24 | Herniation of Intestines |

CCF's Dairy goats are managed for milk production and castrated males and old or inferior bucks are sold to farmers. Between 1 January 2024 and 31 December 2024, 46 dairy goats (2M, 44F) were sold, amounting to sales of N$117,000.00.

Table 20 provides an overview of CCF's Dairy goat sales.

*Table 26: Dairy goat sales from 1 January 2024 to 31 December 2024 (M = male, F = female, W = weather).*

| SB # | Name | Sex | Date of Birth | Date of Sale | Price |
|---|---|---|---|---|---|
| **592** | Alice 2 | F | 06-Aug-20 | 30-May-24 | N$2,500.00 |
| **666** | Amaryllis | F | 11-Dec-20 | 30-May-24 | N$2,500.00 |
| **726** | Ana | F | 07-Aug-21 | 30-May-24 | N$2,500.00 |
| **761** | Azalea | F | 06-Dec-21 | 30-May-24 | N$2,500.00 |
| **736** | Beryl | F | 14-Aug-21 | 30-May-24 | N$2,500.00 |
| **670** | Dolcetto | F | 15-Dec-20 | 30-May-24 | N$2,500.00 |
| **589** | Elma | F | 05-Aug-20 | 30-May-24 | N$2,500.00 |
| **746** | Gize | F | 25-Aug-21 | 30-May-24 | N$2,500.00 |
| **702** | Hazel | F | 02-Aug-21 | 30-May-24 | N$2,500.00 |
| **780** | Hennessy | F | 16-Dec-21 | 30-May-24 | N$2,500.00 |
| **703** | Lazuli | F | 02-Aug-21 | 30-May-24 | N$2,500.00 |
| **751** | Lola | F | 24-Nov-21 | 30-May-24 | N$2,500.00 |
| **738** | Marina | F | 14-Aug-21 | 30-May-24 | N$2,500.00 |
| **759** | Maya | F | 06-Dec-21 | 30-May-24 | N$2,500.00 |
| **683** | Monique | F | 24-Dec-20 | 30-May-24 | N$2,500.00 |
| **512** | Moyo | F | 12-Aug-19 | 30-May-24 | N$2,500.00 |
| **599** | Nala | F | 07-Aug-20 | 30-May-24 | N$2,500.00 |

| | | | | | |
|---|---|---|---|---|---|
| **855** | Olive | F | 11-Aug-22 | 30-May-24 | N$2,500.00 |
| **712** | Oshana | F | 04-Aug-21 | 30-May-24 | N$2,500.00 |
| **596** | Rue | F | 07-Aug-20 | 30-May-24 | N$2,500.00 |
| **615** | Shila | F | 12-Aug-20 | 30-May-24 | N$2,500.00 |
| **781** | Sienna | F | 16-Dec-21 | 30-May-24 | N$2,500.00 |
| **672** | Susan | F | 16-Dec-20 | 30-May-24 | N$2,500.00 |
| **828** | Taylor | F | 07-Aug-22 | 30-May-24 | N$2,500.00 |
| **889** | 2889 | M | 27-Nov-22 | 30-May-24 | N$3000.00 |
| **850** | Anabeb | F | 10-Aug-22 | 09-Sep-24 | N$2,500.00 |
| **872** | Cheetah | F | 14-Aug-22 | 09-Sep-24 | N$2,500.00 |
| **384** | Chianti | F | 15-Oct-17 | 09-Sep-24 | N$2,500.00 |
| **928** | Devon | F | 29-Aug-23 | 09-Sep-24 | N$2,500.00 |
| **861** | Eileen | F | 12-Aug-22 | 09-Sep-24 | N$2,500.00 |
| **608** | Gabela | F | 11-Aug-20 | 09-Sep-24 | N$2,500.00 |
| **871** | Gwen | F | 14-Aug-22 | 09-Sep-24 | N$2,500.00 |
| **346** | Kir | F | 25-Aug-17 | 09-Sep-24 | N$2,500.00 |
| **734** | Kunene | F | 12-Aug-21 | 09-Sep-24 | N$2,500.00 |
| **953** | Lapaka | F | 04-Dec-23 | 09-Sep-24 | N$2,500.00 |
| **766** | Lea | F | 08-Dec-21 | 09-Sep-24 | N$2,500.00 |
| **600** | Lunda | F | 07-Aug-20 | 09-Sep-24 | N$2,500.00 |
| **301** | Marie-Antoinette | F | 02-Nov-16 | 09-Sep-24 | N$2,500.00 |
| **356** | Marsala | F | 31-Aug-17 | 09-Sep-24 | N$2,500.00 |
| **853** | Mercelin | F | 11-Aug-22 | 09-Sep-24 | N$2,500.00 |
| **856** | Sequoia | F | 11-Aug-22 | 09-Sep-24 | N$2,500.00 |
| **359** | Stella | F | 13-Sep-17 | 09-Sep-24 | N$2,500.00 |
| **662** | Tanaka | F | 04-Dec-20 | 09-Sep-24 | N$2,500.00 |
| **816** | Utaa | F | 03-Aug-22 | 09-Sep-24 | N$2,500.00 |
| **866** | Vawa | F | 13-Aug-22 | 09-Sep-24 | N$2,500.00 |
| **892** | 2892 | M | 01-Dec-22 | 09-Sep-24 | N$4000.00 |
| | | | | **Total** | **N$117,000.00** |

## B.2.4 Milk Production

There are several major factors that play a role in the amount of milk given by a specific goat. These factors include; the breed, age of the animal, lactation stage, amount and type of feed, temperature, milking frequency, availability and duration of free-ranging, animal health condition, and the type of management practice. Each goat is milked twice a day, although the number of goats milked each month depends on their lactation stage.

Between 1 January 2024 and 31 December 2024, up to 86 goats were milked every day for a total production of 33,158.52kg of milk. Of this milk, only 700kg was used to raise goat kids as per the new bottle raising protocol which meant only 32,458.52kg was supplied to the creamery (Table 26).

*Table 27: Goats milked, amount produced (kilograms), and how much allocated to kids and creamery from 1 January 20234 to 31 December 2024.*

| | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Goats Milked** | 40 | 40 | 56 | 68 | 69 | 65 | 54 | 51 | 54 | 49 | 55 | 42 |
| **Total Produced** | 3066.82 | 2857.98 | 3253.34 | 3179.13 | 3191.95 | 2756.38 | 2833.19 | 2635.10 | 2843.72 | 2721.11 | 1920.59 | 1899.21 |
| **Used to Raise Kids** | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 100 | 200 | 200 | 200 |
| **To Creamery** | 3066.82 | 2857.98 | 3253.34 | 3179.13 | 3191.95 | 2756.38 | 2833.19 | 2635.10 | 2743.72 | 2521.11 | 1720.59 | 1699.21 |

The amount of milk each individual goat produces is monitored on a daily, weekly, and monthly basis. This allows us to determine when they are producing the most milk and then compare the amounts produced to the feed they are given.

Table 22 shows the amount of milk production per goat per month.

*Table 28: Milk production (kilograms) per goat per month from 1 January 2024 to 31 December 2024.*

| Goat | SB# | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Abbi | **651** | 57.73 | 49.36 | 44.8 | 45.84 | 31.97 | 8.01 | - | - | - | - | 28.43 | 78.35 |
| Ablonia | **492** | 53.97 | 66.28 | 69.90 | 64.13 | 54.01 | 51.54 | 37.40 | 36.76 | 3.77 | - | - | - |
| Alex | **798** | - | - | - | - | 27.69 | 31.90 | 100.38 | 124.57 | 129.82 | 118.29 | 13.85 | 1.745 |

| | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Alice 2 | **592** | - | - | 47.20 | 53.70 | 63.51 | 72.97 | 85.50 | 63.89 | 71.76 | 69.51 | 113.57 | 97.88 |
| Amaryllis | **666** | - | - | 79.00 | 44.86 | 63.59 | 61.81 | 70.79 | 52.69 | 53.72 | 65.29 | - | - |
| Amelia 2 | **591** | 66.57 | 63.46 | 79.20 | 42.83 | 20.22 | - | - | 57.62 | - | - | 6.46 | 41.61 |
| Amber | **553** | - | - | - | 1.37 | 2.86 | 0.96 | - | - | - | - | - | - |
| Anabeb | **850** | - | - | - | - | - | - | - | - | - | - | 8.14 | - |
| Autumn | **764** | 94.28 | 90.18 | 92.30 | 60.24 | 59.01 | 51.53 | 47.54 | 53.56 | 63.75 | 47.30 | - | - |
| Bambi | **740** | - | - | - | - | - | - | - | - | - | - | 12.22 | 42.71 |
| Barolo | **521** | 86.86 | 83.78 | 89.50 | 74.84 | 80.61 | 67.77 | 60.16 | 44.60 | 54.44 | 43.42 | - | - |
| Blackfoot | **622** | 101.70 | 101.80 | 95.60 | 50.49 | 62.07 | 29.88 | 0.26 | - | - | - | 21.45 | 59.14 |
| Carolina | **621** | - | - | 138.00 | 66.29 | 73.33 | 36.08 | 53.58 | 78.25 | 51.17 | 39.10 | - | - |
| Cecilia | **594** | - | - | - | - | - | - | - | - | - | 102.33 | 82.10 | 68.31 |
| Chianti | **384** | 121.40 | 97.01 | 86.20 | 47.42 | 74.88 | 59.95 | 20.26 | - | 1.50 | - | - | - |
| Chive | **558** | 101.20 | 101.91 | 134.00 | 82.70 | 79.92 | 82.18 | 75.25 | 122.24 | 74.53 | 52.42 | 18.10 | - |
| Chloe | **434** | 172.00 | 157.67 | 94.40 | 143.60 | 144.28 | 102.74 | 119.04 | 50.81 | 121.10 | 103.33 | - | - |
| Cosmos | **612** | 90.13 | 102.11 | 85.60 | 70.72 | 61.98 | 47.23 | 40.58 | 109.86 | 53.46 | 37.59 | - | 1.10 |

| | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Crystal | **510** | 128.10 | 131.48 | 70.20 | 128.7 | 124.18 | 135.13 | 115.98 | 71.98 | 75.80 | - | - | 45.26 |
| Cypress | **842** | - | - | - | - | - | - | - | - | - | - | 14.94 | - |
| Dolcetto | **670** | - | - | 12.50 | 29.92 | 26.00 | 37.58 | 70.63 | 62.79 | 64.23 | 65.85 | - | - |
| Dominique | **554** | 48.83 | 70.40 | 97.20 | 94.73 | 116.68 | 89.58 | 88.42 | 66.58 | 79.55 | 86.24 | 68.67 | 2.65 |
| Elma | **589** | - | - | 10.30 | 55.78 | 66.07 | 62.98 | 75.537 | 22.57 | 63.11 | 65.69 | 65.69 | 55.89 |
| Fransina | **713** | - | - | - | - | - | - | - | - | - | - | 27.18 | 53.39 |
| Frida | **678** | - | - | - | 1.82 | 1.84 | - | - | - | 0.72 | - | 20.74 | 52.18 |
| Gabela | **608** | - | - | - | - | - | - | - | - | - | - | 21.66 | 66.47 |
| Gardenia | **646** | 107.40 | 101.60 | 50.20 | 86.22 | 83.53 | 40.98 | 3.545 | - | - | - | 36.69 | - |
| Gize | **746** | - | - | - | 6.24 | 19.02 | 24.88 | 26.42 | 31.03 | 15.59 | 11.31 | - | 2.30 |
| Halali | **279** | 63.57 | 46.55 | 47.20 | 45.17 | 40.45 | 29.39 | 31.47 | 95.66 | 34.36 | 35.15 | 35.11 | - |
| Helena | **433** | 118.40 | 109.59 | 72.10 | 126.5 | 83.86 | 32.89 | 83.02 | 71.65 | 112.48 | 98.89 | 72.71 | - |
| Indigo | **645** | 58.35 | 63.29 | 90.20 | 69.06 | 65.16 | 71.75 | 79.34 | 61.99 | 81.24 | 90.66 | 68.65 | 55.13 |
| Isabel | **595** | - | - | 7.30 | 44.42 | 47.02 | 53.97 | 61.06 | 49.01 | 66.76 | 82.98 | 75.08 | 8.09 |
| Johanna | **750** | - | - | - | - | - | - | - | - | - | - | 20.40 | - |

| | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Kalahari | **790** | 82.21 | 98.53 | 49.90 | 74.31 | 66.82 | 55.46 | 29.81 | 5.27 | 63.71 | 38.32 | - | 71.94 |
| Kariba | **629** | - | - | - | - | - | - | - | 57.98 | 53.09 | 75.23 | 67.19 | - |
| Khenzi | **628** | - | - | 50.40 | 7.03 | 3.29 | 1.95 | - | - | - | - | - | 54.43 |
| Kendall | **664** | 45.31 | 30.56 | 38.20 | 32.43 | 31.50 | 22.65 | 1.72 | - | - | - | 15.31 | 71.74 |
| Kir | **346** | - | - | 47.20 | 13.30 | 37.55 | 52.15 | 62.62 | 43.23 | 66.45 | 70.29 | 78.90 | 31.27 |
| Kunene 2 | **734** | - | - | - | - | - | - | - | - | - | - | 11.59 | 43.88 |
| Kwando | **609** | 61.05 | 45.58 | 72.10 | 23.84 | 4.96 | 0.45 | - | - | - | - | 26.74 | 52.38 |
| Lauren | **714** | - | - | - | - | - | - | - | - | - | - | 17.24 | 56.53 |
| Lilac | **708** | - | - | - | 3.28 | 2.33 | 0.81 | - | - | - | - | - | - |
| Lilibet | **699** | 81.87 | - | 86.10 | 62.58 | 62.84 | 21.51 | - | - | - | - | 31.70 | 57.39 |
| Lisa | **744** | - | - | 7.80 | 4.62 | 6.46 | - | - | - | 19.69 | 10.84 | 18.40 | 30.68 |
| Lizzie | **289** | 66.88 | 49.55 | 21.30 | 40.63 | 47.69 | 49.31 | 68.36 | 25.23 | 32.35 | 34.47 | 25.48 | - |
| Lola | **751** | 49.72 | 58.9 | 72.40 | 42.12 | 33.23 | 22.85 | 26.15 | 14.53 | 35.57 | 50.73 | - | - |
| Lotus | **484** | 105.20 | 106.06 | 104.00 | 76.84 | 69.81 | 57.32 | 48.69 | 49.55 | - | 4.25 | 10.18 | - |
| Lunda | **600** | 33.67 | 41.39 | 63.10 | 18.60 | 28.88 | 21.69 | - | - | 64.15 | 67.34 | 2.22 | 5.89 |

| | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Madeira | **522** | - | - | 7.50 | 44.15 | 53.52 | 55.41 | 64.63 | 46.24 | 41.18 | 37.94 | 70.31 | 40.83 |
| Malachite | **648** | - | - | - | - | - | - | - | - | - | - | 14.79 | 37.03 |
| Marie-Antionette | **301** | 64.92 | 53.76 | 64.40 | 47.61 | 44.76 | 36.45 | 40.48 | 48.56 | 58.74 | 74.26 | 36.64 | - |
| Maria | **588** | - | - | 8.87 | 52.09 | 56.35 | 49.35 | 61.93 | 29.23 | 23.57 | 28.18 | 17.5 | - |
| Marina | **738** | - | - | 1.61 | 7.17 | 14.56 | 15.52 | 20.91 | 53.64 | 57.83 | 64.83 | - | - |
| Martha | **709** | - | - | - | 8.51 | 29.89 | 48.81 | 66.33 | 43.46 | 50.18 | 38.60 | 17.15 | - |
| Marsala | **356** | - | - | - | 11.01 | 23.99 | 43.69 | 56.79 | 41.38 | 36.13 | 40.15 | - | - |
| Maya | **759** | 25.65 | 28.56 | 57.20 | 30.56 | 31.29 | 27.58 | 35.50 | 65.96 | 64.95 | 26.47 | - | - |
| Meredith | **498** | 90.36 | 103.22 | 79.20 | 83.78 | 73.43 | 62.62 | 61.13 | 57.21 | 64.50 | 70.14 | - | - |
| Modesta | **732** | - | - | - | 12.26 | 32.37 | 45.38 | 61.78 | 60.92 | 66.57 | 69.04 | 52.88 | 36.39 |
| Molly | **715** | - | - | - | - | - | - | - | - | - | - | 14.97 | 41.26 |
| Moyo | **512** | 96.29 | 34.78 | 82.20 | 33.30 | 38.17 | 57.3 | 42.67 | 35.65 | 0.75 | - | - | - |
| Nala | **599** | 123 | 113.01 | 71.00 | 28.74 | 6.50 | 1.12 | - | | 39.38 | 30.77 | 18.33 | 1.80 |
| Ngoma | **686** | 93.65 | 101.83 | 65.90 | 89.23 | 71.92 | 45.15 | 38.311 | 9.293 | 86.65 | 107.45 | 0 | 95.37 |
| Nicole | **513** | - | - | 4.33 | 48.05 | 19.26 | 35.12 | 66.135 | 62.631 | 27.75 | 40.97 | 108.60 | 33.09 |

| | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Olive | **855** | - | - | - | - | - | - | - | 60.44 | 12.34 | 47.30 | - | - |
| Oshana | **712** | - | - | - | - | - | - | - | - | 52.91 | 27.98 | - | - |
| Pansy | **707** | - | - | - | - | - | - | - | - | - | - | 18.53 | 41.19 |
| Posey | **652** | - | - | 4.81 | 43.99 | 69.81 | 71.83 | 68.85 | 36.18 | 35.34 | 24.73 | 9.36 | - |
| Purros | **688** | - | - | - | - | - | - | - | - | - | - | 31.17 | - |
| Quartz | **515** | 82.02 | 74.67 | 58.90 | 60.66 | 58.66 | 70.64 | 59.6 | 50.34 | 48.52 | 45.70 | - | - |
| Robin | **453** | - | - | 6.42 | 34.61 | 34.31 | 35.68 | 34.89 | 1.76 | 57.71 | 48.98 | - | 43.30 |
| Rose | **307** | 68.06 | 55.04 | 35.50 | 51.66 | 34.28 | 37.37 | 51.25 | 32.46 | - | - | 45.88 | - |
| Ruacana | **144** | 22.05 | 25.14 | 39.20 | 22.44 | 16.64 | 5.82 | 2.63 | 46.42 | - | - | - | 64.16 |
| Sage | **613** | 25.25 | 37.53 | 69.90 | 46.63 | 34.90 | 19.24 | 1.10 |  | 84.43 | - | 27.89 | - |
| Shila | **615** | - | - | 6.80 | 45.09 | 35.01 | 29.51 | 39.08 | 52.42 | 1.07 | - | - | - |
| Shiraz | **674** | - | - | - | 14.68 | 51.44 | 59.55 | 59.22 | 52.74 | 53.05 | 60.16 | 59.64 | 66.21 |
| Simone | **572** | 88.72 | 84.27 | 46.70 | 63.19 | 64.78 | 60.35 | 51.14 | 40.32 | 37.29 | 0.06 | - | - |
| Stella | **359** | 58.12 | 45.78 | 69.70 | 40.72 | 29.23 | 3.02 | - | - | - | - | 20.65 | 43.50 |
| Susan | **672** | - | - | 5.9 | 38.46 | 26.02 | 31.61 | 38.55 | 45.37 | 34.16 | 45.29 | - | - |

| | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Tanaka | **662** | - | - | - | 8.23 | 17.17 | 17.93 | 8.67 | - | - | - | - | - |
| Trendy | **772** | - | - | - | 14.35 | 41.30 | 34.97 | 49.01 | 58.71 | 57.24 | 59.86 | 12.61 | - |
| Topaz 2 | **511** | 112.00 | 119.4 | 65.50 | 100.40 | 88.31 | 88.43 | 102.60 | 51.94 | 86.27 | 99.40 | 103.49 | - |
| Uutapi | **901** | - | - | - | - | - | - | - | - | - | - | 10.87 | - |
| Veneto | **570** | 61.77 | 64.47 | 88.50 | 43.08 | 19.43 | - | - | - | - | - | 18.49 | 39.80 |
| Vistoria | **562** | 50.94 | 39.09 | 45.90 | 41.56 | 37.19 | 10.74 | - | - | - | - | 17.96 | 39.94 |
| Zara | **543** | - | - | 50.30 | 66.66 | 59.27 | 65.25 | 66.49 | 27.93 | 57.34 | 66.03 | 56.09 | 67.00 |
| Zemba | **367** | 7.62 | 10.39 | 11.70 | 9.09 | 9.09 | 1.11 | - | - | - | - | - | - |
| **Total (kg)** | - | 3066.82 | 2857.98 | 3253.34 | 3179.13 | 3191.95 | 2756.38 | 2833.19 | 2635.10 | 2843.72 | 2721.11 | 1920.59 | 1899.21 |

Figure 52 displays the number of goats milked each month and the total milk production per month.

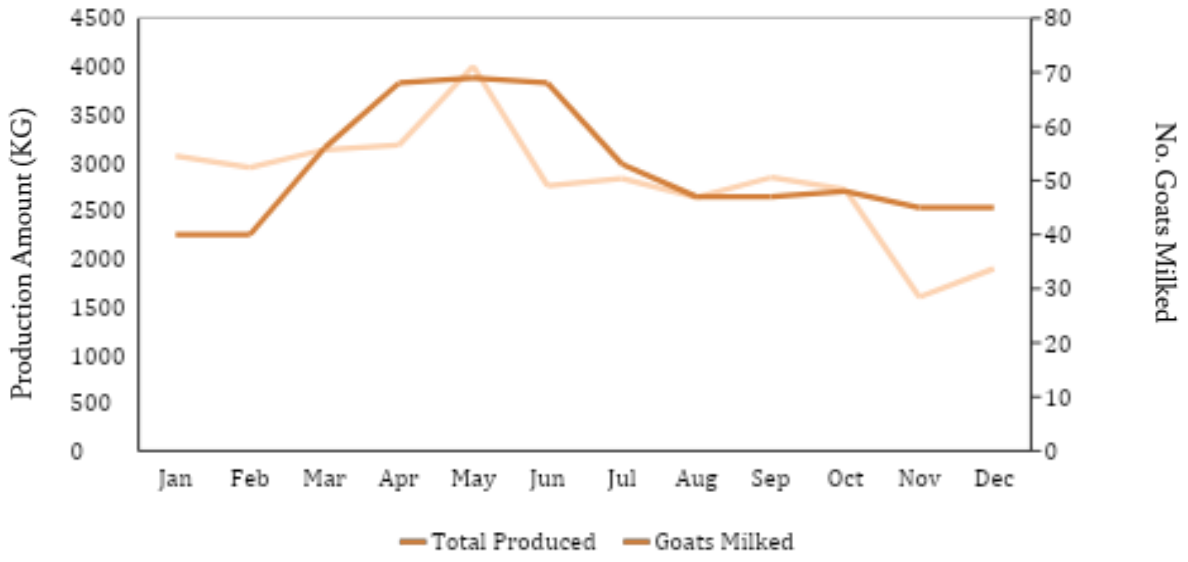



*Figure 52: Milk production versus goats milked from 1 January 2024 to 31 December 2024.*

## B.2.5 Feed Provided to CCF Small Stock

To ensure the health of all our goats and sheep we constantly monitor their food requirements and intake. We currently use four feed products to provide the correct variety of nutrients to our animals. They include Alfalfa hay; ram, lamb, and ewe pellets; milk goat pellets; and grass hay. Figure 39 shows the amount of feed used for each type during this reporting period.

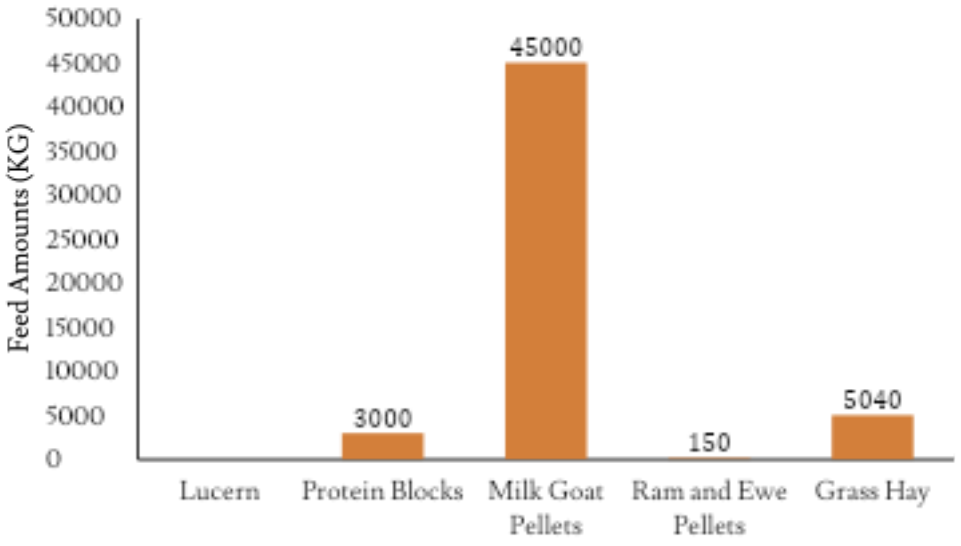



*Figure 53: Amount of feed provided to CCF small stock from 1 January 2024 to 31 December 2024.*

## B.2.6 Vaccinations and De-worming

All of CCF's small stock is treated for internal and external parasites on a quarterly basis in January, April, July, and October of each year. The product used for internal parasite treatment rotates between the following four products: Fenbendazole, Ivermectin, Albendazole, and Doramectin. The product used at each treatment is determined by which product was used previously; anthelmintic products are rotated between drug classes in order to help prevent the development of resistance among the parasites, which can happen when the same product is used repeatedly. Both before and after each quarterly parasite treatment, a herd-wide Faecal Egg Count (FEC) is performed to determine the internal parasite burden in the animals. This is done by collecting representative faecal samples from various areas in the kraal. The pre- and post-treatment testing helps ensure that the treatments reduce the parasite burden in the animals, which helps to ensure the efficacy of the products used. For external parasite (tick, fly, and lice) prevention Paracide (Pfizer Animal Health) and Ultra-Boss Pour-On (Schering-Plough Animal Health) are rotated at each quarterly treatment. Vaccines are applied as follows. In addition, this year CCF vaccinated all small stock against Anthrax.

- Actinomyces – for the control of Caseous lymphadenitis (Corynebacterium pseudotuberculosis) – also known as cheesy gland.
    - All new-borns are vaccinated at two weeks old, three injections must be given 10 days apart and then one injection should be given every 6 months thereafter.

    - Adult animals are vaccinated every 6 months.
- MultiVax P Plus – for the control of dysentery, pulpy kidney disease (Clostridium perfringens Type D), tetanus (Clostridium tetani), Pasteurella (Pasteurella haemolytica) respiratory infection, blackleg (Gangraena emphysematosa), clostridial metritis, blood gut, and infections.
    - All new-borns are vaccinated at four weeks old, then a booster after a month and then annually thereafter.
    - Adult animals are vaccinated annually.
- Brucellosis – for the control of Brucellaovis and Brucella melitensis, a bacterial infection of the reproductive tract.
    - This vaccine is given only once and provides life-long immunity; all young animals are vaccinated at four months of age.
- Enzootic Abortion – for the control of Chlamydophilapsittici, an organism that causes early and late-term abortions.
    - All of the female animals are vaccinated one month before breeding on an annual basis.
- Rabies – for the prevention of rabies virus which causes fatal encephalitis.
    - All new-borns are vaccinated at four months of age, then a booster after a month and then annually thereafter.
    - All adult animals are vaccinated yearly.

## B.3 Hay Production

From 1 June – 31 December 2024, CCF produced 7400 bales of hay.

## B.4 Wild Game Hunted on CCF Property

As part of CCF Model Farm's sustainable wildlife management practices, CCF hunts several wild game species for consumptive purposes, including oryx, kudu, red hartebeest, and warthog. Figure 40 below displays the amount of wild game removed for consumptive use for this reporting period

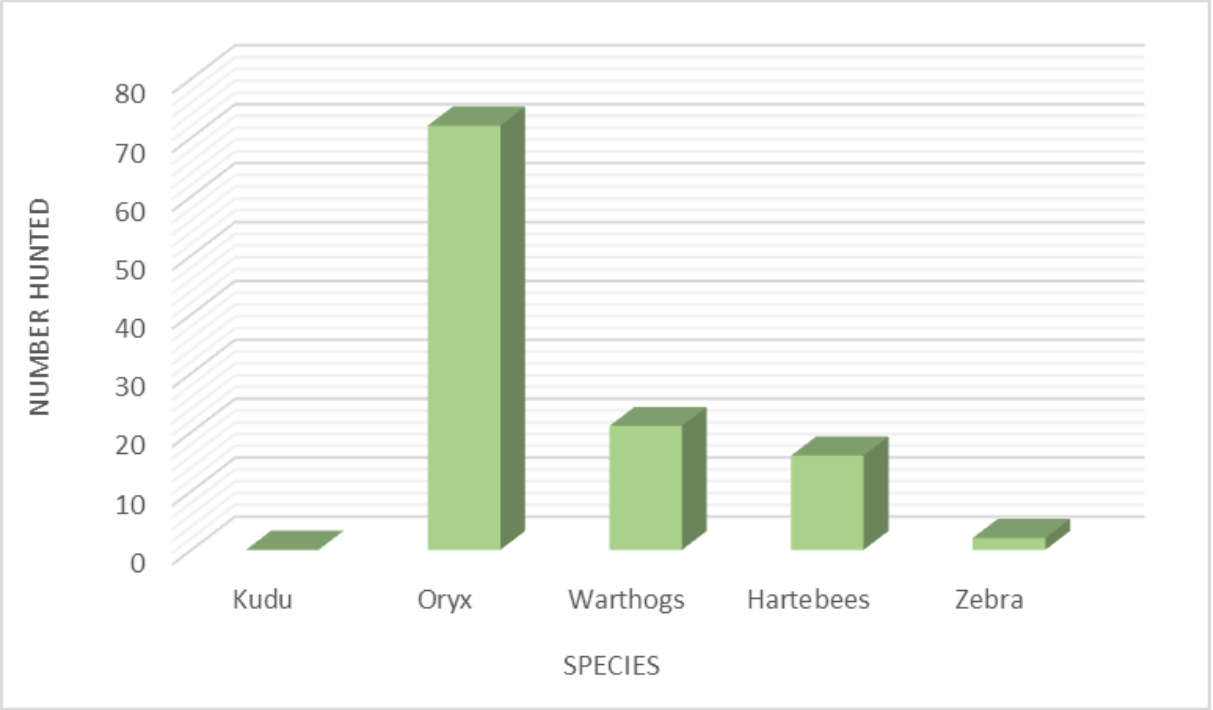



Figure 54: Amount of game utilized by CCF during 1st June – 31 December 2024

# C. Sustainable Economic Programmes Supporting Local Communities

If the world's fastest cat is to survive in the wild, humans must coexist with it. The following progress has been made on CCF's activities that seek to assure the economic well-being of people living within the cheetah's range and provide resources to support CCF's long-term activity.

## C.1 Certified Wildlife Friendly

CCF is a co-founder of The Wildlife Friendly Enterprise Network (WFEN), which is a global community dedicated to the development and marketing of products that conserve threatened wildlife while contributing to the economic vitality of rural communities. The WFEN provides the 'Certified Wildlife Friendly' trademark (Figure 44) that distinguishes enterprises that meet the 109 highest standards of being wildlife friendly. CCF's Bushblok and Dancing Goat Creamery are both Certified Wildlife Friendly.


*Figure 55: Certified Wildlife Friendly logo.*

# C.2 BUSHBLOCK AND FUELWOOD

## C.2.1 Operations: BUSHBLOK®

Production in 2024 amounted to 569.82 tonnes with sales of 489.45 tonnes. Table 22 shows the monthly block production during this reporting period.

***Table 29:*** *Monthly block production January to December 2024.*

| Month | Amount (tonnes) |
|---|---|
| January | 39.20 |
| February | 61.44 |
| March | 54.04 |
| April | 56.64 |
| May | 35.50 |
| June | 50.88 |
| July | 45.12 |
| August | 48 |
| September | 43 |
| October | 22 |
| November | 114 |
| December | 0 |
| Total | 569.82 |

## C.2.2 Operations: Fuelwood

Production in 2024 amounted to 226.19 tonnes with sales of 226.19 tonnes. Table 23 shows the fuelwood production during this reporting period.

***Table 30:*** *Monthly fuelwood production January to December 2024.*

| Month | Amount (tonnes) |
|---|---|
| January | 0.875 |
| February | 0 |
| March | 37.229 |
| April | 30.45 |
| May | 3.75 |
| June | 9.8 |
| July | 32.64 |
| August | 33.25 |
| September | 2.61 |
| October | 34.11 |
| November | 35.48 |
| December | 6 |
| **Total** | **226.19** |

# D. Eco-Tourism

Tourism has been one of Namibia's largest growing industries in the past decades, with a large number of developments emerging in the Otjiwarongo area over the past couple of years. CCF has become one of the region's leading travel and tourism destinations, thus boosting the local businesses of Otjiwarongo. We strive to provide supporters and guests with the best stay and experience when visiting.

## D.1 Visitors to CCF

By the end of 2024, CCF had received a total of 17,257 visiting tourists, of which 1,783 (Cheetah View Lodge and Babson House) were overnight tourists. This represents a 9 % increase from 15,829 in 2023. In terms of total revenue, this period in 2024 saw a 18.5 % increase at N$17,298,933.99 compared with N$14,592,495.38 in 2023. In addition to school groups, researchers and film crews mentioned separately, CCF hosted many CCF friends, supporters, and collaborators in 2024.

CCF hosted friends, supporters, and collaborators from January to December 2024 and saw a good increase. CCF continues to be open to the public 364 days a year and welcomes all travelers worldwide.

The following friends, supporters, and collaborators visited CCF during this reporting period;

January

- In mid-January Sven Odman brought friends of his and stayed at the lodge for two nights. Sven is a semi-retired veterinarian. Sven came to CCF as a vet volunteer in 2009 and his son Jakob was an intern at CCF in 2011. Sven came in for a visit with a former long-term volunteer from a few years ago, Swede Göran Lindström. He returned to CCF on 31 January 2024 to be a working guest for 2 weeks.

February

- Clive Johnson visited for the third year in a row. Clive is the Director and the President of B2Gold since December 2006 and Chief Executive Officer since March 2007. He and a group from B2Gold did a Cheetah Run and had breakfast. He also came to see Teja the cheetah named after his son Teja.
- Steve O'Brien and Klaus Koepfli. Both are renowned geneticists. Steve is the past chair of CCF USA and is still part of the CCF USA directive Board. His research with CCF goes back to 1982.
- Bill and Deborah Crowson stayed at Babson house. Mr. Crowson has visited Africa 13 times and explored 22 countries. He is the owner of an industrial US-made chain company located in Dixon, IL, not too far from Chicago. Their clients are John Deer and Caterpillar, to name a few, and although very humble, he is earmarked as a Major donor with high end capacity. He has been a donor since 2020.

- Sue Heim was a working guest at CCF. She works as a senior compliance program manager of Boardcom Corporation and has been a supporter and volunteer with CCF San Diego chapter since 2022.

March

- Ellen Clark, Elizabeth Clarke, Michelle Winchester and Carol Di Flippo stayed at Babson House. They are dear friends to Rob Cain who worked with Dr. Laurie Marker on several projects.

April

- Early April we welcomed CCF Namibia board members and longtime friends Mary Kruger and Lynn Wertz (daughter of Mary) to Cheetah View Lodge for two nights. They visited with Jenny and Greg from Rock Lodge.
- Teresa Lobo Fernandes and her family came to see what we do. Teresa is a veterinarian at the Lisbon Zoo Veterinary Hospital in Portugal.
- Bob Brewer, the brother of our CCF General Manager Dr. Bruce Brewer came to visit CCF and experience the work we do.
- Christian Barbaud, the CCF France president visited with his wife and they stayed at Cheetah View Lodge for two nights.
- In April CCF hosted a small film crew, Ms. Caillin Basson is the Namibian representative from the Wild Africa Fund. The Wild Africa employs mass communications – such as the Music for Wildlife Concerts and Poaching Steals From Us All campaigns – to raise awareness of poaching, habitat loss and human wildlife conflict. It promotes wildlife tourism and carbon offset as sources of conservation and sustainable development funding.

May

- End of May we had Denis and Camille from Parc Animalier d'Auvergne and are a partner of CCFs activities on the field through PLAY FOR NATURE. Parc animalier d'Auvergne is a French Zoo in Center of France. Camille Fluzin is one of the managers of the education team at the Zoo and Denis is the Zoological Director and the Veterinarian of the Zoo. https://www.parcanimalierdauvergne.fr/
- Neal and Muriel Shipp stayed at Cheetah View Lodge, they are from the US and clients of Alan Feldstein who is part of the CCF USA board of directors.
- We hosted Nancy Boynton as a working guest for her 18th year of visiting CCF. Nancy is a tired music teacher and classical performer and a very dear friend to Laurie, Bruce and the whole CCF team.

June

- In the beginning of June we hosted a Warner Bros. Discovery film crew for the recce of a documentary on CCF, they returned to CCF in July to finish filming.

- Joanna Biggar and her family finally got to stay at Babson house after having to cancel a couple of times as the result of the COVID-19 pandemic. Joanna is a well-known author from the US, she has travelled solo in the most remote areas of China, chaired a school board in Ghana, worked as a journalist in Washington, D.C., and taught school kids in Oakland, California. She is a member of the Society of Woman Geographers.

July

- In the beginning of July we hosted the same Warner Bros. Discovery film crew at CCF for 2 nights. They are working on a new project to share more about the work we do here at CCF.
- Our dear friend and continuous supporter Eileen Flynn visited for 5 nights in July. Eileen is an active member of the Northern California CCF chapter and supports and helps when Dr. Marker is in the Northern California area.

August

- Dr. Shira Yashphe and three of her friends visited CCF in early August. Shira is the Director of Wildlife Crime and International Policy, based in Israel for us here at Cheetah Conservation Fund.
- Lance Williams and his partner Grant Kretchik stayed at Babson house in mid-August for 2 nights. They are long term CCF supporters and friends of Dr. Marker from South California / New York. They were very excited to finally get to see CCF Namibia and experience and learn of all the work CCF does. During their visit they kindly offered to host a fundraiser for Dr. Marker and CCF for the upcoming fall fundraising tour, which was a huge success.
- Cameron Hempstead, long- time friend and supporter from the San Francisco area won an auction voucher at a sailing event in 2023 and visited CCF Namibia along with her mother in late August 2024 for the first time, using her winning voucher at Babson House 2 nights.
- Jennifer Keagen was a VIP working guest staying at the lodge, Jennifer is a retail executive, investor and business owner currently volunteering to transition her retail skills towards work in community-based wildlife conservation and farm animal welfare. It was great having her learn about CCf and she also shared a lot of valuable business knowledge with the team

September

- Yvette Ayala from Reclaimed Earth brought a VIP group to CCF for 4 nights. They had in depth tours of each department and also did some hands-on work with staff around the center.

October

- In the beginning of October, we hosted Anne McPhie and her husband David at Cheetah View lodge on a fully inclusive basis. They had in depth tours of each department and got to learn about all the work CCF does. Anne is a former working guest at CCF, she last visited in 2017.

- Mark Stanback arrived at the end of October and stayed for almost 3 months. Mark is a dear friend of CCF. Professor Emeritus of Biology at Davidson College, Dept. of Biology, Davidson, NC - has installed nest boxes for hornbills at CCF and other sites in Namibia as part of his research (was here in 2013 & 2015, 2017/18, 2018/19 and 2023/24 and several of his PhD students have also been at CCF)
- Babson House x 2 / Sophia Verdon-Roe and her husband were the CCF UK auction gala winners for a 2-night stay at CCF Namibia. Sophia shared how impressed she was with how comprehensive the setup of CCF is. From working with the farmers through to the dog program, farming dairy goats and the production to the release tracking, programs of the cheetah gene and education programs.
- Long time friends of Dr. Marker and Dr. Brewer Mr. Lynn Kramer & Ms. Patty McGill came for a couple of nights to visit them and experience CCF s luxury Babson house.

November

- Sandi Leishman stayed at Cheetah View Lodge as a VIP working guest for 2 weeks, Sandi is a long-term supporter of CCF and friend of Dr. Marker; last came to CCF in 2000
- Jeff Muntifering, an old friend and colleague of CCF visited with his family in November Jeff is an Adjunct Professor at Namibia University of Science and Technology and a Science Adviser at Save the Rhino Trust (SRT).

December

- Miss Earth 2024 now an ambassador of CCF visited and joined all the CCF staff on International Cheetah day celebrations in early December
- Long time friend of Dr. Marker and CCF from Colorado, Kim Burrell and her friend Nicole Niemann came to CCF for the first time they learned what CCF does and about all the programs running.
- Dr. Sarah Woodhouse and the Executive Director of the Nebraska Wildlife Rehab Inc Laura Stastny came to visit and collaborate with Dr. Marker.
- Sue Heim Long time friend and great supporter of CCF Namibia for 4 weeks as one of our working guests. She arrived late in December staying through to January 2025.
- Stephen J. O'Brien, Ph.D., Director; Professor, Nova Southeastern University, Ft. Lauderdale, Florida, USA arrived on 31 December 2024 for the planning and setting up of the ConGen conference that will take place in January 2025.

## D.2 Visitor and Guest Analysis

As tourists are increasingly becoming seasoned international travelers, they become more discerning and choose those destinations that can provide a more memorable experience and good value for their money. Therefore, CCF strives to ensure that the product offered to the tourism sector is sufficiently attractive. COVID-19 had a huge impact on the revenue and

number of guests visiting CCF, the loss of income was tremendous, but as we can see in the explanations below, we are definitely back and even doing better than 2019.

## D.2.1 Day Visitors

This reporting period from January until December shows an increase of 8.7% in day-visiting tourists, from 14,238 in 2023 to this year's 15,474 visitors (Figure 33). This is a significant increase in day-visiting guests, with a busy August with 2,383 guests.

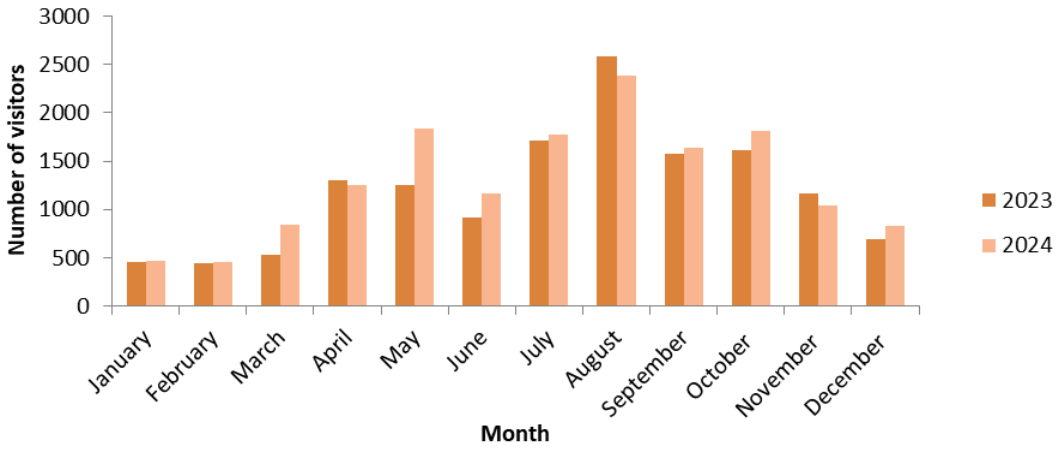



*Figure 56: Number of monthly visitors at CCF from January to December 2024.*

The predominant language spoken by visitors during this period was French (15%), followed by German (15%), English (33%) and Italian (11%). During this reporting period, we had some local visitors who spoke local languages; Otjiherero, Afrikaans, and Damara (Figure 34). The majority of day visitors were from the following countries; Germany (13%), France (15%), and Italy (11%) (Figure 35).

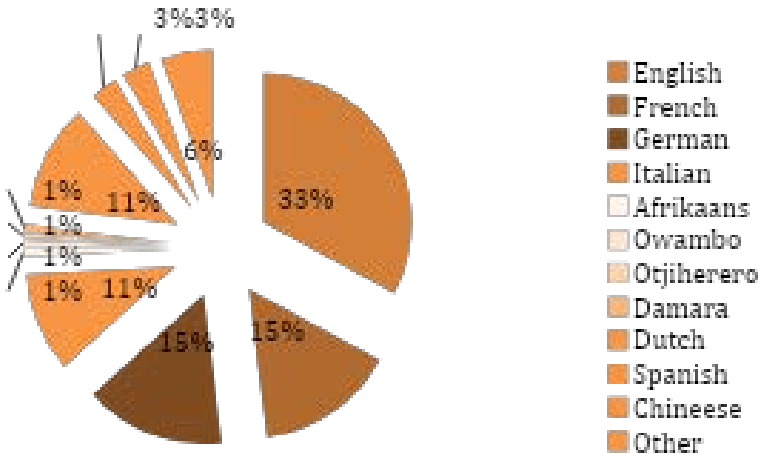



*Figure 57: Languages spoken by visitors from January to December 2024.*

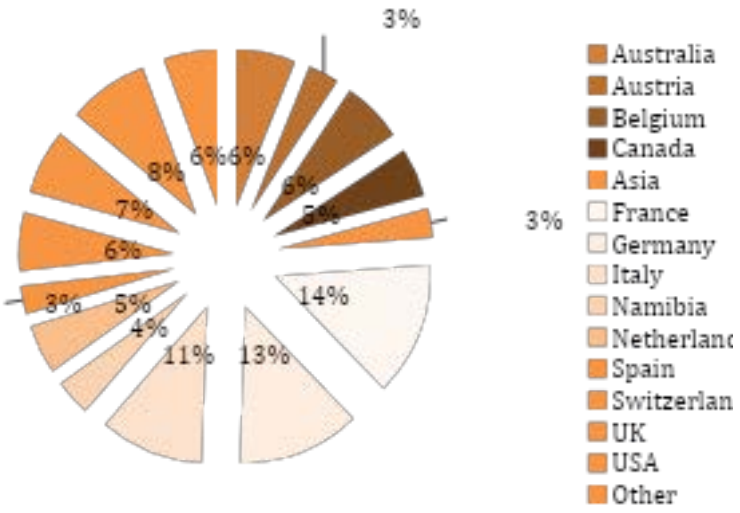



*Figure 58: Percentage of visitors per country from January to December 2024.*

Most (65%) visitors continue to be walk-ins, which includes direct bookings (at least 50%) from our reservation office, Exclusive Reservations, who also book and communicate 100% of online bookings and tour operator bookings (27%) (Figure 36). We have also noticed a good increase from our friends on neighboring farms Frans Indongo Lodge, Aloe Grove and Waterberg Guest Farm.

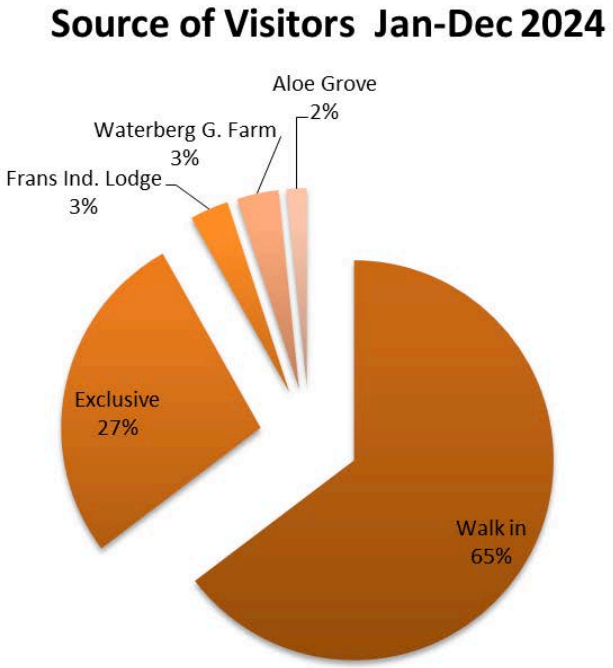



*Figure 59: Source of Visitors from January to December 2024.*

## D.2.2 Financial

In terms of tourism revenue from day-visiting guests, CCF saw an increase during this reporting period of 16.5%, at N$10,019,041.77 in 2023 compared to N$11,670,634.08 in 2024 (Figure 41).

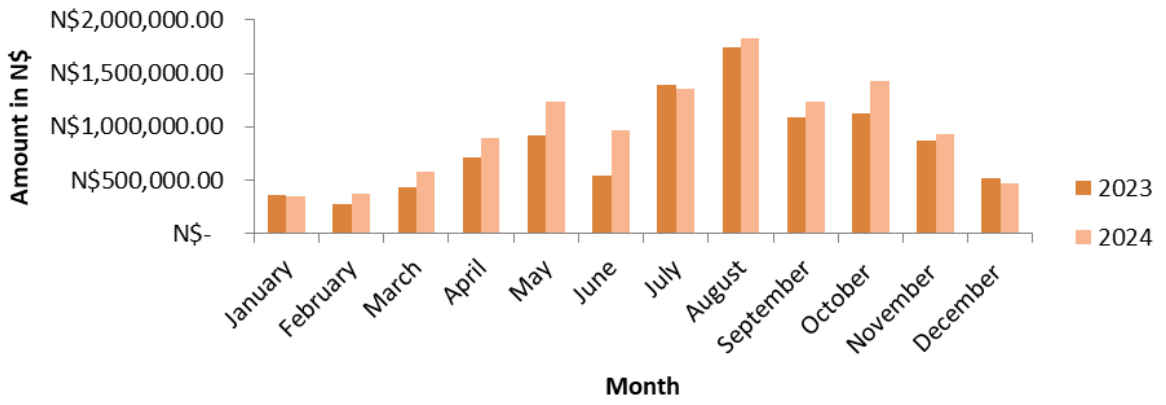



*Figure 60: Day visitor income (N$) comparison during January and December 2024.*

The monthly breakdown of income per activity and number of visitors is shown in Table 30. The month with the highest average expenditure per visitor was November at N$899.57 and the lowest month was December at N$579.16. The Cheetah Drive represented the highest income source during this period, at 43.6% of the total income of N$ 5,088,9438.25, and the Gift shop revenue showed a 16.85% of income in this reporting period with N$1,966,899.00. The third highest revenue driver was the Center Tours & Feeding with N$1,430,833.50, 12.26% of the total income for day visiting guests. A reminder that accommodation shown on this table is only coming from camping or rondavel guests paid on site.

*Table 31: Breakdown of revenue (N$) from January to December 2024.*

| ACTIVITY | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP | OCT | NOV | DEC | TOTAL | % |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **CHEETAH DRIVE** | 162170.25 | 155154.50 | 252765.00 | 353922.00 | 452772.00 | 423125.50 | 613,920.00 | 928,310.25 | 547,887.25 | 659,250.00 | 342,334 | 196,828 | **5,088,438.25** | 43.60% |
| **GIFT SHOP** | 50712.00 | 80826.00 | 84610.00 | 152124.00 | 209273.00 | 174635.00 | 243,438.00 | 265,638.00 | 220,449.00 | 228,138.50 | 170,966 | 86,090 | **1,966,899.00** | 16.85% |
| **ED CENTER** | 34944.00 | 34116.00 | 78559.00 | 140830.00 | 207571.00 | 105027.00 | 158,496.00 | 182,860.00 | 148,928.00 | 156,611.00 | 122,455 | 60,437 | **1,430,833.50** | 12.26% |
| **RUN** | 35288.00 | 27710.00 | 40585.50 | 81017.50 | 173076.00 | 121574.00 | 95,096.50 | 156,176.00 | 119,947.50 | 108,178.50 | 65,702 | 43,008 | **1,067,359.00** | 9.15% |
| **ACCOM** | 1200.00 | 0.00 | 3600.00 | 900.00 | 7100.00 | 1400.00 | 3,150.00 | 5,140.00 | 0.00 | 0.00 | 63502 | 0 | **85,992.00** | 0.74% |
| **CAFÉ** | 48265.00 | 44724.00 | 69245.00 | 95350.00 | 126502.00 | 94832.00 | 165,230.00 | 201,341.00 | 126,502.00 | 155,393.50 | 92,626 | 49,360 | **1,269,370.50** | 10.88% |
| **SERENGETI** | 4675.00 | 4640.00 | 16815.25 | 22622.00 | 18700.00 | 16830.00 | 17,010.00 | 33,195.00 | 23,830.00 | 34,595.00 | 21,571 | 8,652 | **223,135.25** | 1.91% |

| | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **BEHIND THE SCENES** | 10436.25 | 19550.00 | 14353.00 | 20130.00 | 17264.00 | 14522.00 | 24,255.00 | 16,995.00 | 13,900.00 | 55,836.00 | 18000 | 4000 | **229,241.25** | 1.96% |
| **DONATIONS** | 0.00 | 0.00 | 3000.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 2000 | 9175 | **14,175.00** | 0.12% |
| **OTHER** | 335.00 | 385.00 | 1590.00 | 2515.00 | 0.00 | 548.33 | 880.00 | 4,035.00 | 0.00 | 510.00 | 7756 | 1785 | **20,339.33** | 0.17% |
| **CHEESE** | 7675.00 | 9845.00 | 17820.00 | 22880.00 | 272855.00 | 194800.00 | 31,120.00 | 35,305.00 | 30,910.00 | 31,650.00 | 24145 | 16735 | **274,850.00** | 2.36% |
| **TOTAL** | **N$ 355,700.50** | **N$ 376,950.50** | **N$ 582,942.75** | **N$ 892,290.50** | **N$ 1,239,543.00** | **N$ 971,973.83** | **N$ 1,352,595.50** | **N$ 1,828,995.25** | **N$ 1,232,353.75** | **N$ 1,430,162.50** | **N$ 931,055.50** | **N$ 476,069.50** | **N$ 11,670,633.08** | 100.00% |
| VISITORS | 464 | 456 | 837 | 1254 | 1832 | 1161 | 1779 | 2383 | 1637 | 1814 | 1035 | 822 | 15474 | |
| **Avg Exp/ Visitor** | N$ 766.60 | N$ 826.65 | N$ 696.47 | N$ 711.56 | N$ 676.61 | N$ 837.19 | N$ 760.31 | N$ 767.52 | N$ 752.81 | N$ 788.40 | N$ 899.57 | N$ 579.16 | N$ 754.21 | |

## D.2.3 Cheetah View Lodge

Cheetah View Lodge hosted 1662 guests from January till December 2024 compared to the 1,487 guests for the same period in 2023, representing a good increase of 11.8%. Overnight guests were recorded from January to December during this reporting period according to the number of bed nights. The total number of bed nights during this reporting period was 2259 compared to 2,207 in 2023, representing a 2.4% increase (Figure 47). Peak season seems to be changing in tourism. April, May and October had a staggering increase and August had a decrease compared to last year 2023.

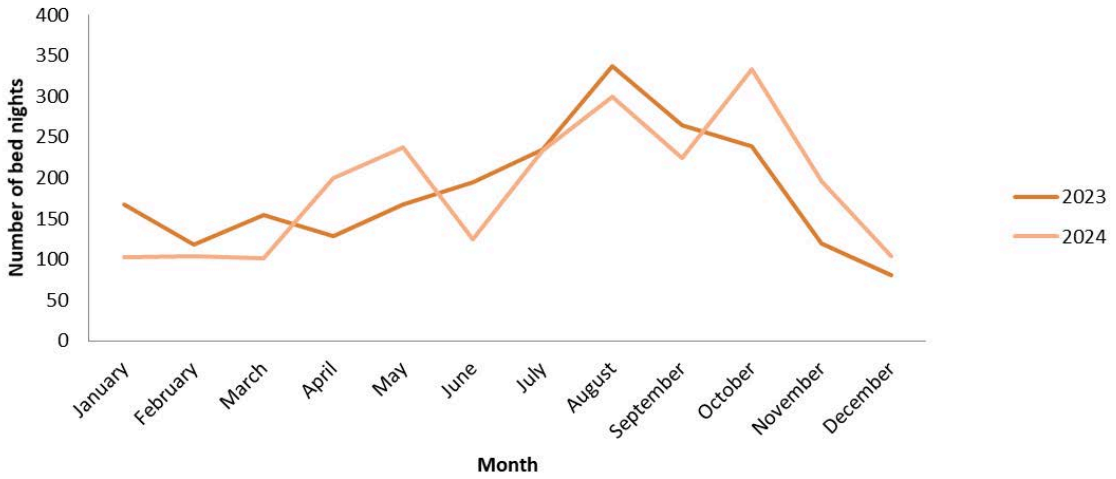



*Figure 61: Number of bed nights at Cheetah View Lodge comparing January to December in 2023 and 2024.*

Revenue from the Cheetah View Lodge saw an increase of 21.6%, from N$3,792,787.36 in 2023 to N$ 4,610,209.91 in 2024 (Figure 48).

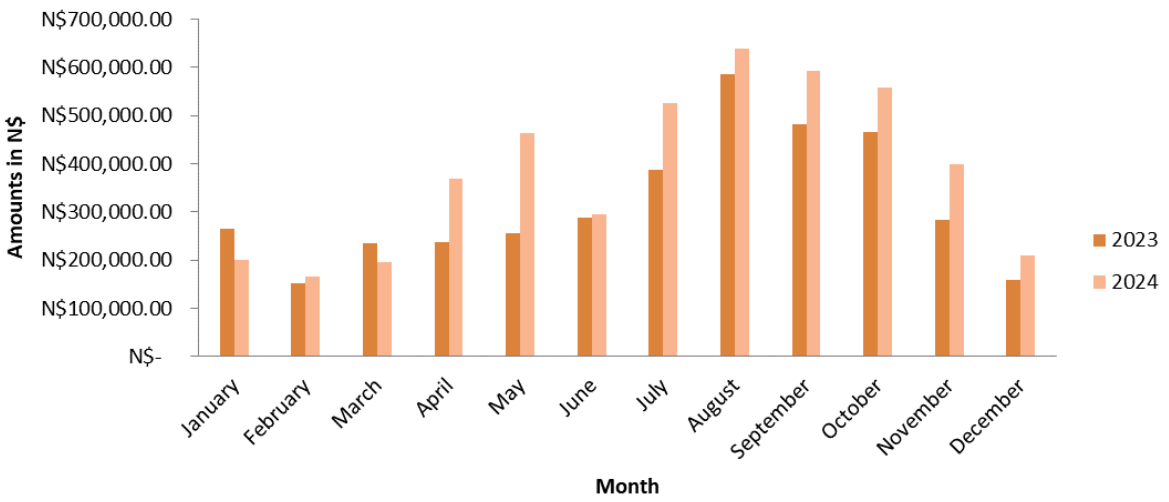



*Figure 62: Revenue from the Cheetah View Lodge comparing January to December in 2023 and 2024.*

Visitors were booked by various Tour operators with the majority (58.71%) of the bookings coming through our reservation office, Exclusive Reservations. Booking.com and Expedia (always rechecked and followed up by Exclusive reservations) bookings represented 22.17% of 2024. CCF direct bookings from the CCF website including donors, friends of CCF and film crew accommodations represented 19.11% of all bookings. CCF received a total of 884 confirmed room bookings throughout this reporting period (Figure 40).

There is an increase in tour operators with 200 different sources or operators booking accommodation at CCF or sending enquiries regarding CCF's tourism activities. Exclusive Reservations handles all of CCF's tour operator bookings which include Ultimate Safaris, Private Safaris Namibia(PTY), Namibia Tracks & Trails, Great Explorations Namibia, Wilderness Safaris, Katika Safaris, Damarana Safaris, African Leisure Travel , Abenteuer Afrika Safaris, Kupenda Safaris, Passion Africa Travel, Wild Wind Safaris, Sense of Africa, Tourmaline Safaris, Wild Travel Africa, Namibia Tours and Safaris, Namibia Individual Travel, Natures Friend and Namibia Tracks and Trails and many more.


*Figure 63: Booking sources for Cheetah View Lodge, January to December 2024.*

In terms of nationalities, most guests at Cheetah View Lodge were German (24%), followed by French (19%), Italy (13%), and the Netherlands and USA at 6% (Figure 41).

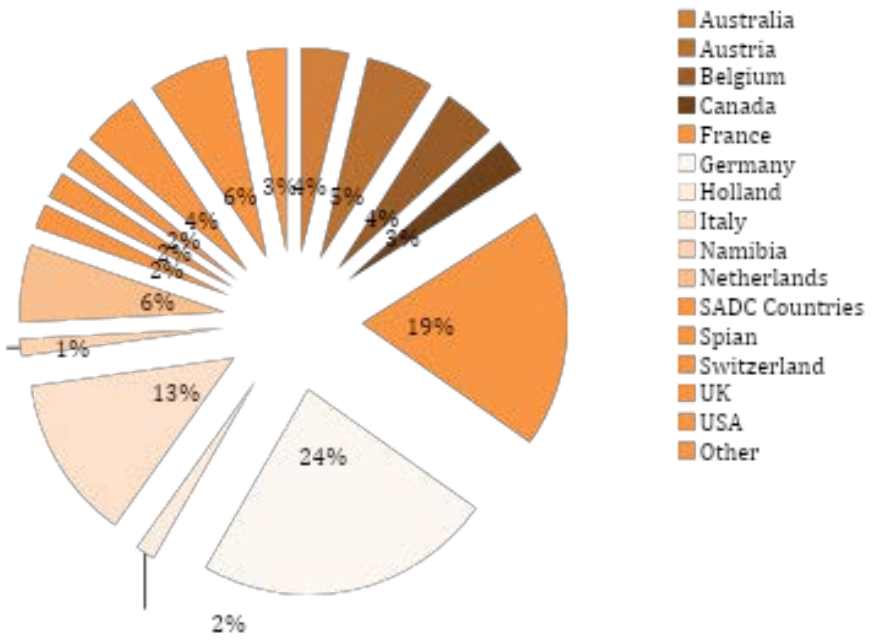



*Figure 64: Nationalities of visitors staying at Cheetah View Lodge, January to June 2024.*

## D.2.4 Babson House

Babson House is CCF's luxury guest house and is booked on a fully inclusive basis. This means that all our normal tourism activities and in-depth tours of each department along with meals and drinks are included in this booking normally.

Babson House is usually very quiet during the first three months of the year, with guests expected from May to November. We hosted a total of 121 guests at Babson House from January till December 2024, compared to 104 guests in 2023 representing a 16.3% increase in guests. There was a 17.7% decline in bed nights during this reporting period (200 Bed Nights) compared to the same reporting period last year (243 Bed Nights) (Figure 42).

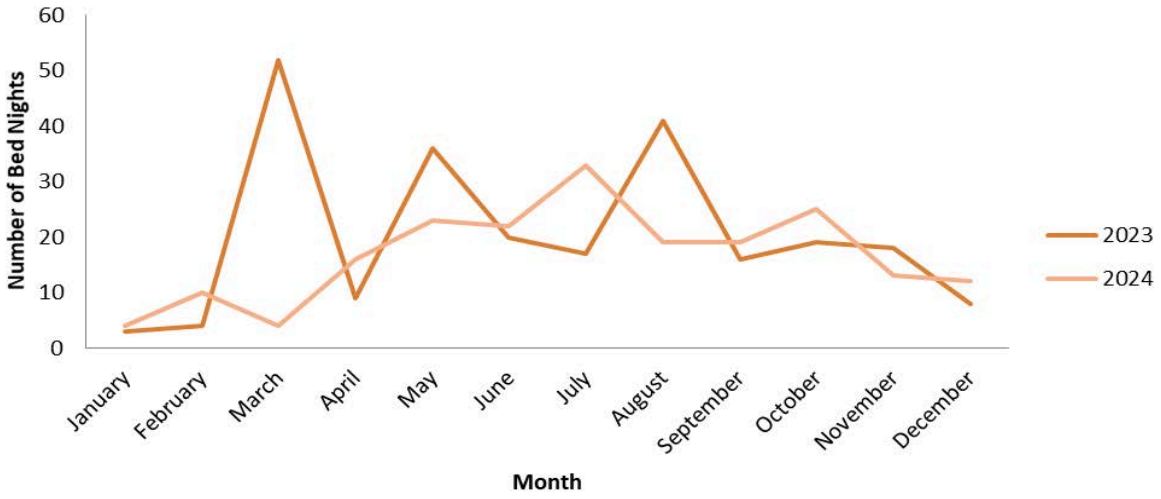



*Figure 65: Number of bed nights for Babson House comparing January till December in 2023 and 2024.*

We saw an increase of 4.3% of revenue from N$976,434.75 in 2023 to N$1,018,090.00 in 2024 (Figure 50).

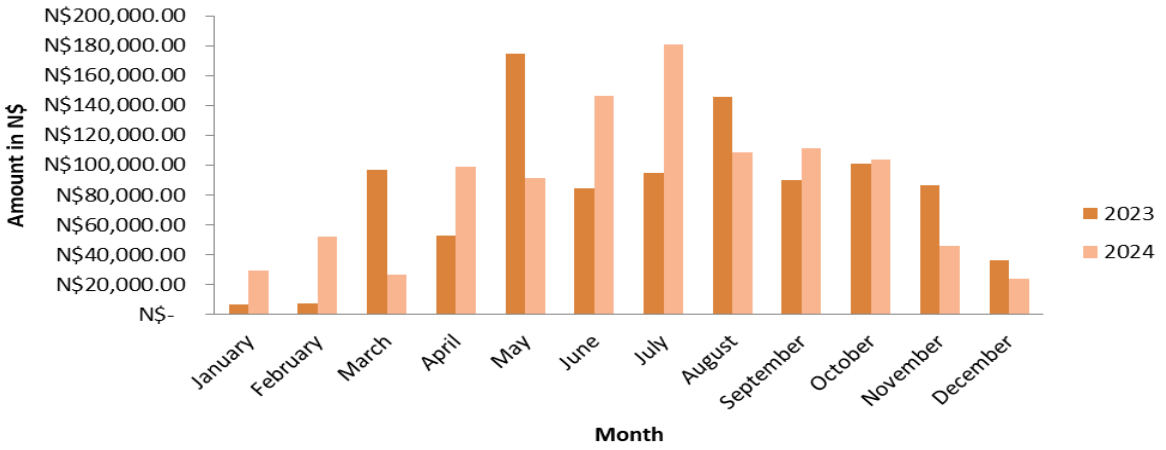



*Figure 66: Revenue from Babson House comparing January till December in 2023 and 2024.*

CCF received a total of 71 room bookings for this reporting period. Of which many of them were from CCF's friends and supporters and booked directly (39.43%). We had some online bookings (7.04%) at Babson House. Other bookings were booked by tour operators through CCF's Exclusive Reservations (53.52%) like Ultimate Safaris, Go2Africa, Wilderness Safaris SA and NA, Terra Nova Tours, Namibia Tracks & Trails, and Kaapstad Tours (Figure 44). All these bookings and the online bookings were done through our booking office Exclusive Reservation.

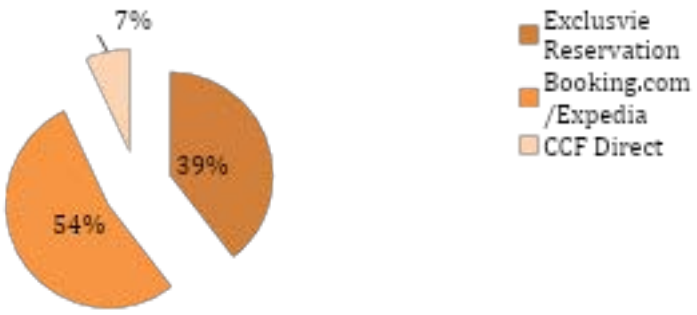



*Figure 67: Sources of Babson House bookings, January to December 2024.*

Most overnight visitors at Babson House were from the USA (55%), followed by Germany (26%) the United Kingdom (17%), and two people for China (Figure 52).

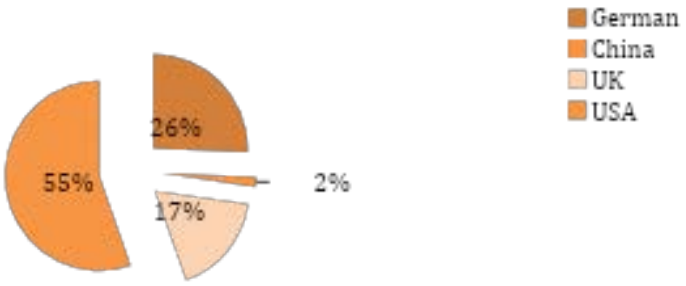



*Figure 68: Nationalities of overnight visitors at the Babson, January to December 2024.*

## D.3 Food Expenses

The number of people eating at CCF differs every day in accordance with the various guests, working guests, volunteers, and interns arriving and leaving CCF.

Table 28, shows the number of lunches and dinners that were cooked at CCF's community dining room, the Hot Spot, each month. A total of 29,150 meals were cooked during January to December 2024 for an average of 81 meals per day.

***Table 32:*** *Number of meals served at CCF's Hot Spot from January to December 2024.*

| Meal | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lunch | 961 | 986 | 1085 | 1080 | 1116 | 1268 | 1431 | 1321 | 1298 | 1356 | 996 | 1024 |
| Dinner | 985 | 1020 | 1115 | 1102 | 1231 | 1759 | 1305 | 1450 | 1371 | 1401 | 1037 | 1452 |
| **Total** | **1946** | **2006** | **2200** | **2182** | **2347** | **3027** | **2736** | **2771** | **2669** | **2757** | **2033** | **2476** |

| | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Average/ day | 63 | 72 | 71 | 73 | 76 | 101 | 91 | 89 | 89 | 89 | 68 | 80 |

Most of the meals (48%) served at the Hot Spot were for CCF staff members. Volunteers and interns represented (35%), while Working Guests (WG) and other guests represented (17%) (Figure 46).

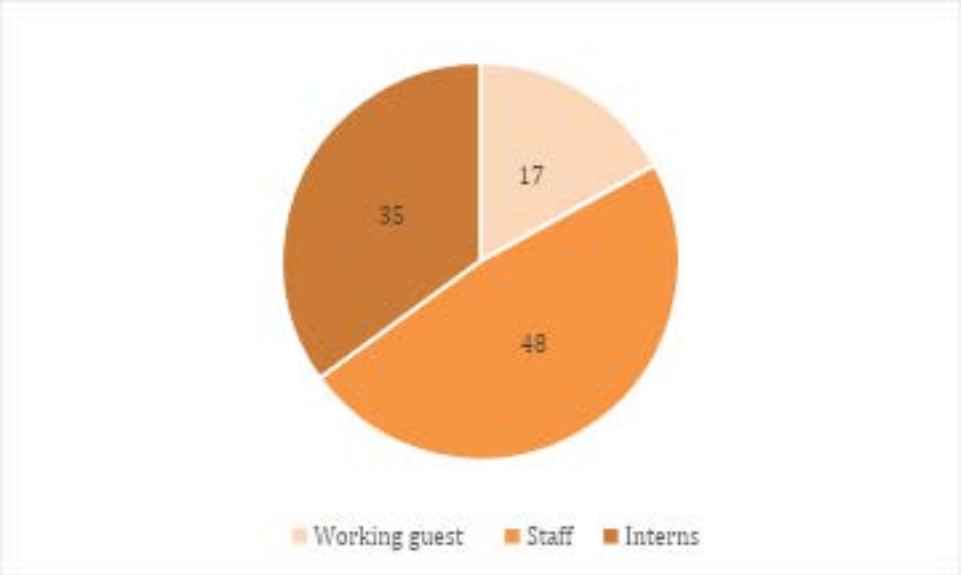



*Figure 69: Overall categories of people served at the Hot Spot in January to December 2024.*

## D.4 Marketing

The Travelers' Choice Awards honour (formerly known as the Certificate of Excellence) recognises businesses that consistently deliver great service. CCF is part of an exclusive group, ranking among the top 10% of listings on Tripadvisor worldwide. During this reporting period, the Cheetah Conservation Fund (including Cheetah View Lodge and Babson House) was the winner of Tripadvisor Travellers Choice Award for 2024.

CCF's marketing agent, Exclusive Reservations, continues to support our eco-tourism efforts both with reservations, bookings, and its objective of transforming the CCF brand to make it distinctive and different. Exclusive Reservations also promotes CCF by regularly visiting other tour operators in Windhoek at their offices and organising meetings for companies based in Swakopmund. They also sent out the updated CCF 2024/2025 rates during this period. Exclusive Reservation participated and represented CCF in expos based in South Africa, including Africa's largest travel show, INDABA Durban and the World Travel Market in Cape Town. Exclusive also organised an educational visit with some of the Namibian tour operators throughout the year to promote CCF's accommodation facilities, Cheetah View Lodge and Babson House, and to familiarise the tour operators with CCF's work as an education and research centre.

Exclusive Reservations also attended the annual Hospitality Association of Namibia's (HAN's) Hospitality Tourism Trade Forum (HTTF) & Gala and represented CCF.

Throughout the first six months of 2024, CCF continued its advertising partnerships with numerous publications and online channels adding a few new ones to the accommodations. These included Brochures Namibia, Where to Stay, Namibia Travel Info, NamibiaTourism.NET, and the Namibia Tourism Trade Directory, Namibia Holiday & Travel, Travel News Namibia, Xtinct online Magazine and Safari Africa online Magazine (English and German).

Attractions that encourage tourism operators to market CCF as a destination continue to be evaluated, as do the information and materials supplied to visitors on departure, to encourage them to become engaged and share their experience with their closer and wider networks once they have returned to their homes. CCF staff actively promotes our social media websites (Facebook, Twitter, YouTube, TripAdvisor, and LinkedIn) to all guests visiting CCF.

## D.5 Media at CCF

In April, CCF hosted a film crew from Wild Africa Fund to film PSAs with Namibian musicians (Big Ben Kandukira and Kalux) to raise awareness on Namibian wildlife and conservation. The Wild Africa employs mass communications – such as the Music for Wildlife Concerts and Poaching Steals From Us All campaigns – to raise awareness of poaching, habitat loss and human wildlife conflict. It promotes wildlife tourism and carbon offset as sources of conservation and sustainable development funding.

In June, CCF hosted a Warner Bros. Discovery film crew for a recce for the documentary "Return of the Cheetah".

In July, CCF hosted returning Warner Bros. Discovery film crew, for continuous filming of the documentary "Return of the Cheetah", this time with host Hazen Audel. The documentary aired on December 4th 2024 in Asia, Africa and other countries (not in Europe / US).

In September, a German journalist, Juergen Friedrich, visited CCF and his articles will be published in various (travel) magazines in Germany.

In November CCF hosted Ruben Lambrechts and his PR team from the UK. Ruben Lambrechts is a Namibian influencer as well as farmer, traveler, and safari operator. Ruben and his team came to CCF to learn more about the work we do, as well as to film a short video (that will be shared on YouTube soon) about Ruben at CCF and cheetah conservation.

In December CCF hosted a film crew from Germany, Blue Print Media, at CCF to film part of their "Dr. Dreesen – Ein Hof für Tiere" (A Farm for Animals) TV show. Dr. Dreesen and team came to CCF to learn more about our conservation work at first hand, focusing on cheetahs, the livestock guarding dogs and the model farm. This episode will air in Germany in the spring of 2025.

## D.6 CCF Cheetah Café

Since the opening of CCF's Dancing Goat Creamery early in 2013, menu items at the Cheetah Café have included the very popular CCF Goat Cheese Platter, local platter, and baked feta, as well as fresh muffins, scones, quiches, wraps, a cake of the day, and goat milk ice cream, which is a favourite on hot days. Goat milk fudge that is produced at the Dancing Goat Creamery is also offered for sale at the Café and Gift Shop.

After a fire from a lightning strike on 16 October 2013 destroyed the CCF Visitor Centre along with the Cheetah Café, the café operated from a small room in the Cheetah Museum building until the café reopened in June 2017. Since the reopening of the Cheetah Café, CCF is now seeing the benefits of improved facilities as day visitors and lodge guests can enjoy lunch, a snack or coffee at the café between activities at CCF.

The Cheetah Café had only a few pre-booked lunches in the first three months of 2024 and then increased as we went into the busy tourism season which started in April 2024. CCF saw a big increase in the number of visitors supporting the Cheetah Café which resulted in a 58.2% increase in sales during 2024 compared to 2023.

Total revenues from the Cheetah Café during this period was N$1,269,370.5 in 2024(Table 32) vs N$802,496.00 during 2023 .

*Table 33: Cheetah Café sales from January to December 2024 (N$).*

| Month | Pre-Booked | A la Carte | Drinks& Snacks | Total: |
|---|---|---|---|---|
| January | 9900.00 | 19720.00 | 18645.00 | 48265.00 |
| February | 6580.00 | 19995.00 | 18149.00 | 44724.00 |
| March | 10200.00 | 36870.00 | 22175.00 | 69245.00 |
| April | 15450.00 | 49600.00 | 30300.00 | 95350.00 |
| May | 27340.00 | 66895.00 | 32267.00 | 126502.00 |
| June | 23930.00 | 50975.00 | 19927.00 | 94832.00 |
| July | 31220.00 | 92800.00 | 41210.00 | 165230.00 |
| August | 30650.00 | 118525.00 | 52166.00 | 201341.00 |
| September | 23520.00 | 67340.00 | 35642.00 | 126502.00 |
| October | 29640.00 | 74065.00 | 51688.50 | 155393.50 |
| November | 14890.00 | 42190.00 | 35546.00 | 92626.00 |
| December | 4450.00 | 23245.00 | 21665.00 | 49360.00 |
| **Total Sales** | 227770.00 | 662220.00 | 379380.50 | 1269370.50 |

## D.7 The Chewbaaka Memorial Garden

CCF's Chewbaaka Memorial Garden continues to produce fresh vegetables for consumption by more than 40 CCF staff and volunteers, as well as visitors to the Cheetah Café and Babson House guests. Namibia imports approximately 80% of its fruits and vegetables, mostly from South Africa, transporting them across long distances and increasing the use of fossil fuels and

carbon emissions that contribute to climate change. By localising food production, CCF is not only reducing the environmental and social impacts of transporting food, but is also providing fresher, tastier, and more nutritious meals while saving money.

To counteract the heavy clay-sand soil, CCF uses aged manure from its farm animals, composting and a by-product from its BUSHBLOK production: wood dust. These materials are mixed into the parent soil to improve fertility and organic matter content. CCF is also creating compost from food scraps, which is an essential ingredient for any organic garden. CCF staff, volunteers, and CCF gardener, David Sheehamange and CCF interns have been trained in proper composting techniques. CCF is consistently harvesting a variety of salads and vegetables including; beans, beetroot, squash, lettuce, rocket, spinach, basil, kale, peppers, eggplant, tomatoes, cucumber and spring onion. During this reporting period, CCF's Chewbaaka Memorial Garden also harvested a variety of fruits including fig, grape, citrus and watermelon. A total of 571.9kg of fresh produce was harvested from the garden between January and December 2024, equivalent to 40.2% of the amount from the previous reporting period (2023). Figure 28 shows the amounts of various produce harvested during the reporting period. Pumpkin and Squash, Tomatoes and Lettuce were the most harvested, representing 50.1% of the overall produce.

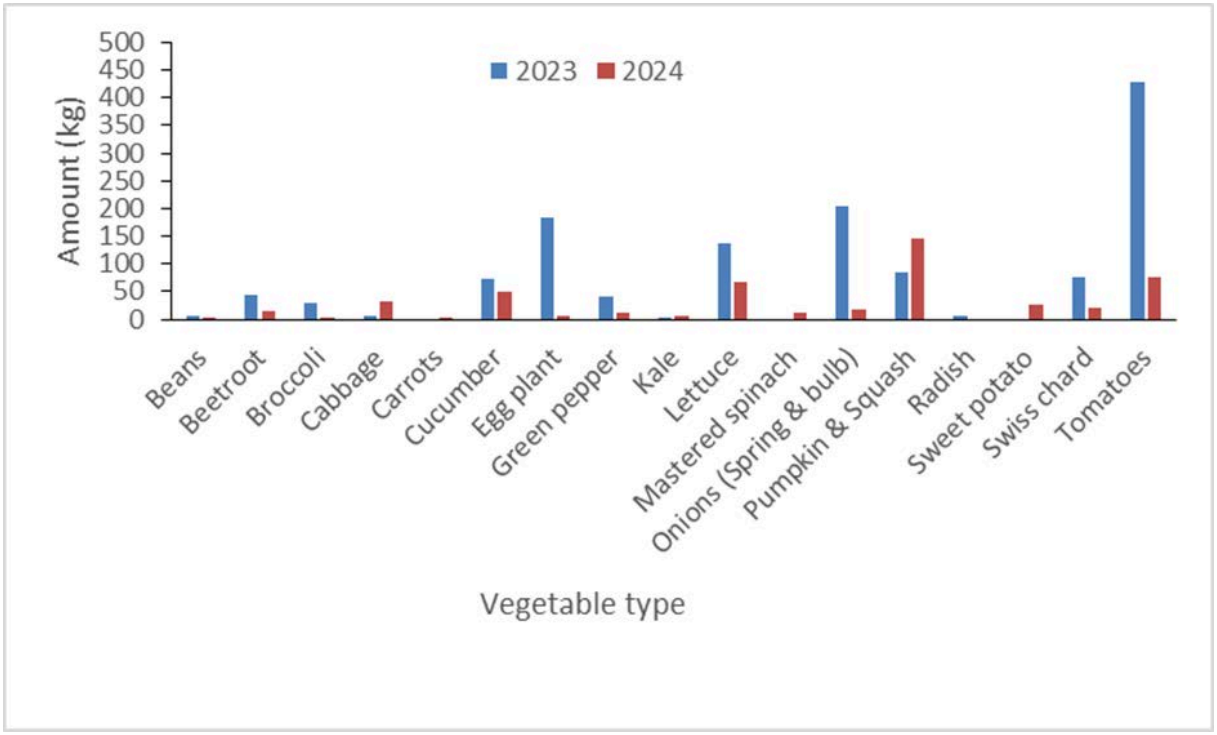



*Figure 70: Vegetables, fruits and herbs harvested from the Chewbaaka Memorial Garden during January - December 2023 and 2024.*

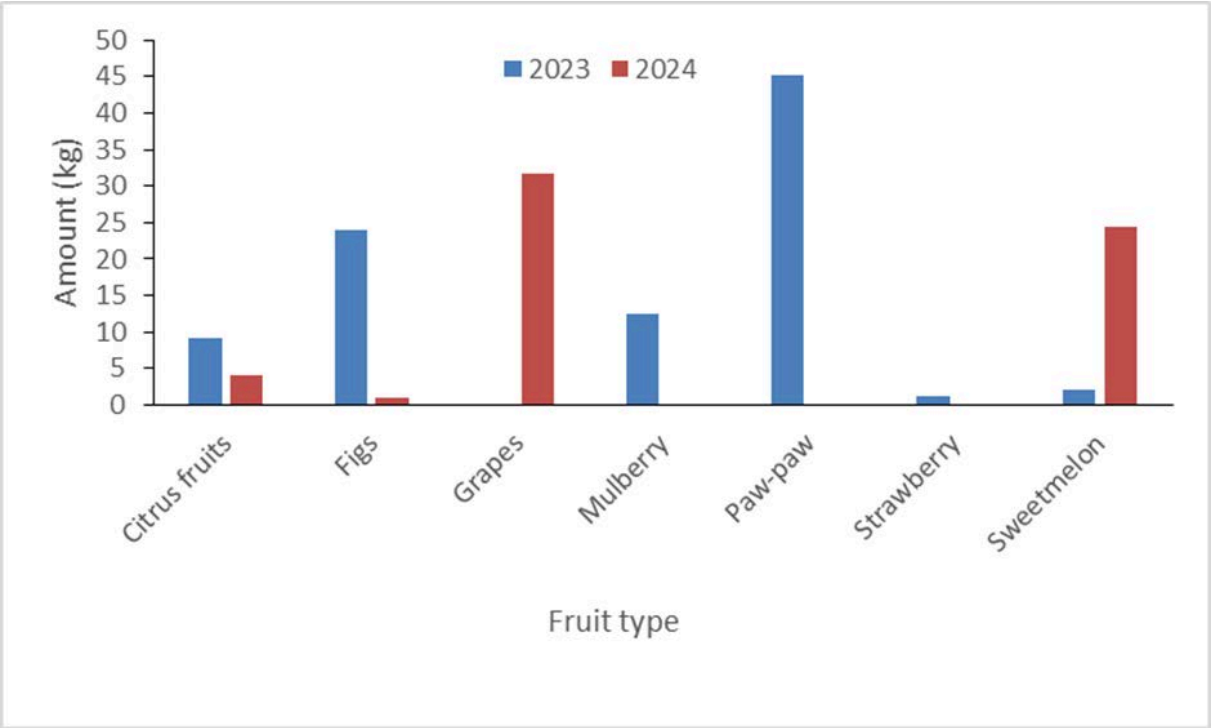



*Figure 71: Fruits harvested from the Chewbaaka Memorial Garden during January - December 2023 and 2024.*

Since its inception, the garden's harvest has continued to grow. By having diverse plantings in a small space, the garden remains chemical-free because it invites beneficial insects to do the work of managing unwanted insects. Sunflowers and other flowers attract pollinators. The vegetables are therefore healthier for the environment, the growers, and the consumers. Seeds were provided courtesy of Baker Creek Heirloom Seeds, an American company based in Missouri that distributes from California. We have 42 varieties of heirloom vegetable seeds.

Because of a designated gift from CCF USA Trustee, Candice Clough, in honour of her father, a new greenhouse and pond were installed in May 2018, including electric and water servicing. The garden is one more step in CCF's sustainability programme, which includes an extensive recycling programme and composting. CCF includes the Chewbaaka Memorial Garden and sustainable practices in farmer training programmes as yet another way to promote alternative livelihoods and economic growth in Namibia.

# E. ASSOCIATION AND CONSERVATION RELATIONSHIPS

## E.1 Large Carnivore Management Association (LCMAN)

CCF is a founding member of LCMAN and continues to work as a stakeholder of this group of NGOs, researchers, farmers, and governmental departments to help guide the conservation and management of large carnivores in the country, and facilitates communication among the stakeholders to ensure a coordinated approach. Dr. Laurie Marker has been the Chair of LCMAN since 2015 and CCF's Lauren Pfeiffer has been the Secretariat since 2019. CCF's Tim Hoffman also regularly attends the LCMAN meetings and acts as a representative for CCF and for the Conservancies of Namibia (CANAM). LCMAN also functions as a resource for the Namibian Ministry of Environment, Forestry and Tourism (MEFT) to provide expert advice and guidance during policy making procedures.

LCMAN continues to work with farmer organisations such as Namibia Agricultural Union (NAU) and CANAM, along with the Professional Hunters Association of Namibia (NAPHA) in providing support to the farming community to reduce human wildlife conflict (HWC). A farmer hotline is available at CCF and a LCMAN email exists to ensure constant communication with farmers and other members of the community when they have questions or conflict with large carnivores in or near their farms.

During this reporting period, there were two meetings held for LCMAN, one on 2 July and the other meeting was held after the AGM on 11 December. CCF was able to attend both meetings and we were able to share our ongoing work and current research with the other LCMAN members.

### E.1.1 2024 LCMAN Focus Areas

Since the publication of the Carnivore Red Data book a couple of years ago, there has been no new large scale focus area for LCMAN. However, LCMAN continues to support smaller focus areas and is currently in the progress of working to get led free ammunition into Namibia to minimise the effects of lead ammunition on the environment.

LCMAN is also continuing to support the development of the Namibian Carnivore Working Group and getting the Ministry of Environment, Forestry and Tourism (MEFT) engaged with this working group. Previously, the government would work closely alongside LCMAN and other non-government organisations (NGOs) and would use current scientific studies on carnivore population, density and ecology findings to regulate new legislations relating to carnivore conservation within Namibia. However, in recent years, the government has taken a

step back from this type of collaboration with NGOs and it was hoped that the development of the carnivore working group would rebuild this collaboration between the government and carnivore researchers and conservationists. Since the launch of the Namibian Carnivore Working Group back in November 2022, there has been little progress with moving forward with the working group. Laurie, as the chairperson of LCMAN, is working alongside members of MEFT with hopes of reestablishing the working group.

## E.2 The Ministry of Environment, Forestry and Tourism (MEFT)

During this reporting period, CCF continued to work with various stakeholders such as the Ministry of Environment, Forestry and Tourism (MEFT) and communities to find lasting solutions to HWC issues.

CCF and MEFT carried out several releases of cheetahs as part of CCF's Early Warning System program that alerts farmers when collared cheetahs enter their farms, and also implemented translocations of cheetahs from human-wildlife conflict incidents. CCF partnered with MEFT and other organizations and prepared a funding proposal towards developing a toolkit for human-wildlife conflict mitigation in select communal conservancies in the east and west of Namibia. The proposal was successful and funding was granted by the Darwin Initiative. CCF has started work in the communal conservancies.

## E.3 Communal Conservancy Development

### E.3.1 Rabies Vaccination Campaign in the Greater Waterberg Landscape Communal Conservancies

#### One Health Program and Rabies Vaccinations

The Cheetah Conservation Fund (CCF) initiated a rabies vaccination campaign aimed at vaccinating domestic animals, namely dogs and cats in the four communal conservancies in the Greater Waterberg Landscape since 2018. The vaccination campaign was initiated in support of the Global Strategic Plan "Zero by 30" of the World Organization for Animal Health (WOAH), the Food and Agricultural Organization (FAO), and the Global Alliance for Rabies Control (GARC), with the aim of eliminating rabies death cases in humans to zero by the year 2030. This program is also in line with CCF's conservation aim of protecting the African wild dog population within the GWL against dog mediated rabies as they are highly susceptible to the disease. This program aims to ensure both human and animal health by eliminating the threat that rabies poses to the communities in the GWL.

CCF conducts the Future Farmers of Africa program on the vaccination campaigns to provide farmers within the conservancies with training on Human-Wildlife conflict, rangeland management, information on various diseases, particularly those which occur commonly in the area and to strengthen the relationship between the communities and CCF to work towards sustainable usage of natural resources.

In addition to the rabies vaccination campaign and FFA farmers days, the CCF team also provides basic veterinary care and advice to the communities within the GWL. The communities in the area do not have access to basic veterinary care due to various limiting

factors and this also provides an avenue to address various animal health and welfare issues within the area.

Throughout the vaccination campaign, a specialised software to capture important essential vaccination data in the field using a streamlined, easy to use application on a smartphone. The data to be streamlined with CCF's database and is also being fed into the national database to have a centralized information base which eases the process of data analysis and reporting.

The work done by CCF is made possible by kind donations from the Foundation for Human Rabies Eradication and Eradication (FHREE).

## RABIES VACCINATION TRIPS IN 2024

For the year of 2024, CCF has planned to conduct 10 trips for mass rabies vaccination campaigns in the Eastern Communal lands. This report aims to summarise the vaccination campaign of 2024. A grand total of 2786 animals were vaccinated with 2099 dogs and 601 cats being vaccinated; a technical issue had occurred on one of the trips whereby 86 entries were lost (Table 1). The first trip was dedicated to expanding the scope of villages vaccinated for the first time in the African Wild Dog (AWD) conservancy as the area had relatively low coverage in previous years; The trips were scheduled in such a manner as to revaccinate the dogs and cats roughly one year after their initial vaccination. The first, ninth and tenth trips were set in place to vaccinate new villages or those villages which had last been serviced in 2019.

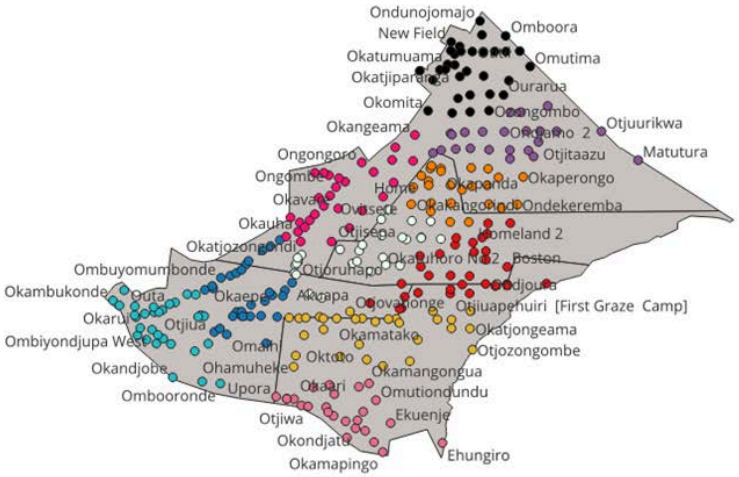



***Figure 72:*** *The map shows all the villages within the four conservancies which were to be visited for the 2024 period.*

A total of 223 villages were vaccinated across all four conservancies by the CCF team while 36 villages were vaccinated by the Okakarara state veterinary office and the satellite offices in the surrounding conservancies

***Table 34:*** *Summary of the vaccination campaigns conducted in the Eastern Communal lands, including the duration of the trip, conservancy visited, number of villages visited and the number of animals vaccinated in chronological order.*

| Trip | Date | Conservancy visited | Villages visited | Animals vaccinated |
|---|---|---|---|---|
| **1** | 10 May – 18 May | African Wild Dog | 22 | 401 |
| **2** | 29 May – 07 June | African Wild Dog | 26 | 289 |
| **3** | 13 June – 19 June | Okamatapati | 29 | 153 |
| **4** | 28 June – 06 July | Okamatapati | 25 | 173 |
| **5** | 13 July – 21 July | Otjituuo | 17 | 133 |
| **6** | 31 July – 09 August | Otjituuo | 16 | 245 |
| **7** | 16 August – 25 August | Otjituuo | 20 | 144 |
| **8** | 31 August – 9 September | Okamatapati | 25 | 240 |
| **9** | 14 September – 23 September | Ozonahi | 17 | 427 |
| **10** | 28 September – 6 October | Ozonahi | 25 | 495 |
| **Total** | | | **223** | **2700** |

## VACCINATION DEMOGRAPHICS

A total of 2099 dogs and 601 cats were vaccinated throughout the year of 2024. A large proportion of animals vaccinated were adult animals which had owners but are allowed to roam freely within the community. There is therefore constant interaction of pets in the community as well as with the livestock present in each village. Juvenile animals, particularly puppies were only vaccinated if the presented as healthy or were vaccinated at least once with a 5-in-1 vaccine which provides immunity against Parvo virus as well as Canine distemper.

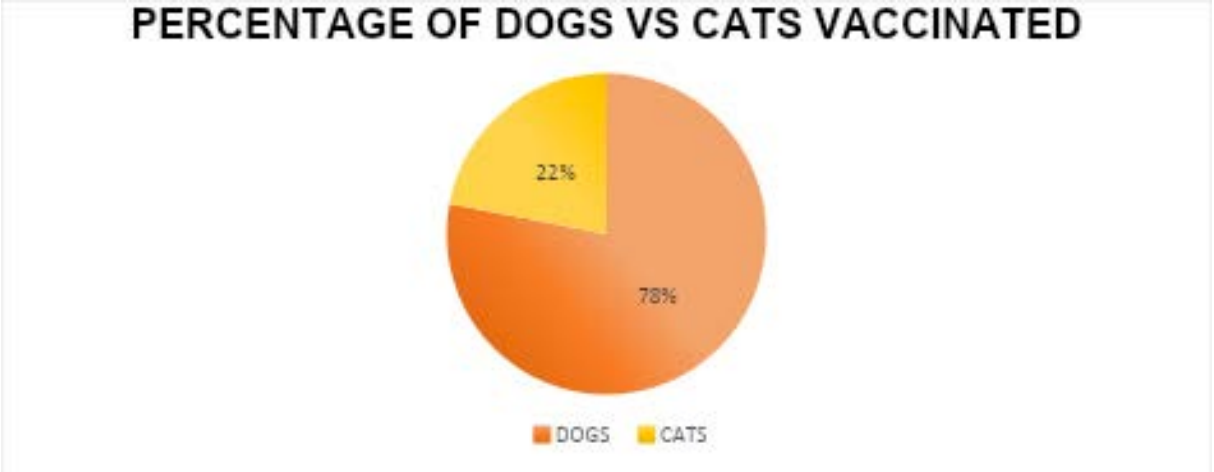



***Figure 73****: The percentage of dogs and cats which were successfully vaccinated in the 2024 vaccination campaign period.*

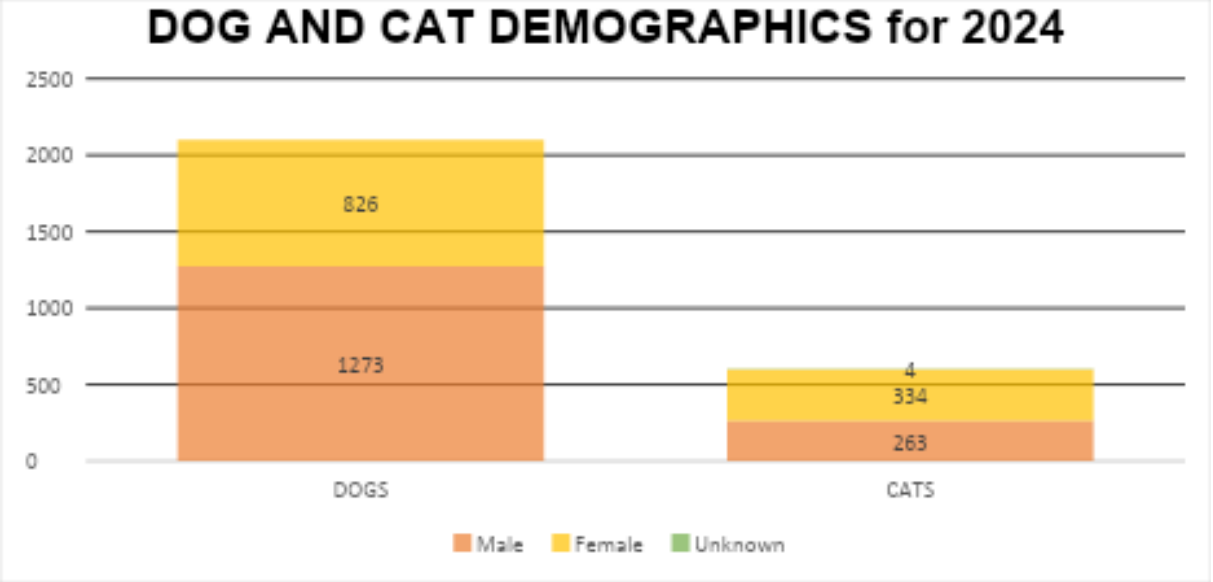



***Figure 74***: The graph above displays the number of dogs and cat vaccinated as well as the sex distribution of each species.

The data collected shows that people are more inclined to owning dogs over cats. However, it should be noted that a notable number of cats are semi-feral, making locating them and safely restraining them difficult. The sex distribution between cats and dogs were as follows: Dogs- 60% were male dogs and 40% were females; Cats- 44% males and 56% females. There were four cats which could not be successfully sexed during the vaccination process.

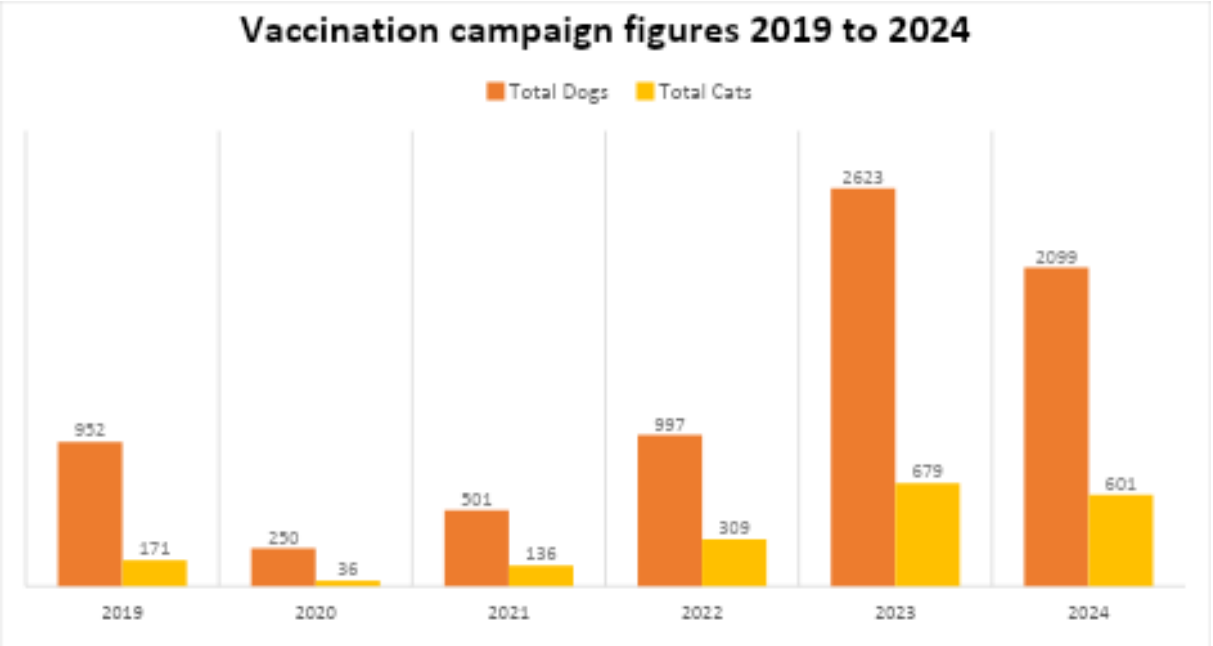



***Figure 75:*** *The figures above highlight the number of dogs and cats vaccinated each year from the inception of the program in 2019. The figures from 2020 and 2021 were very low as a result of the Covid-19 pandemic. 2023 had the highest recorded number of 3302 animals vaccinated. It was aimed to have a similar vaccination number for the year of 2024, but the number vaccinated were lower than expected. This was mainly attributed to the work done by the Okakarara state veterinary office and satellite offices within the conservancies.*

There were however cases of animals which were not used to being handled or in certain cases where the herding dogs had gone out with the flock before the team could arrive at certain villages. This unfortunately meant that certain animals could not be vaccinated.

The following table highlights a more detailed summary of each trip conducted, focusing on the number of cats and dogs vaccinated during each trip.

*Table 35: Total number of dogs and cats vaccinated on each trip as well as the number of animals that received basic veterinary care and those which had received anthelmintic treatment.*

| Trip | Dogs | Cats | Animals vaccinated | Animals treated | Animals dewormed |
|---|---|---|---|---|---|
| **1** | 289 | 112 | 401 | 3 | 101 |
| **2** | 224 | 65 | 289 | 1 | 70 |
| **3** | 125 | 28 | 153 | 2 | 37 |
| **4** | 111 | 62 | 173 | 3 | 13 |
| **5** | 101 | 32 | 133 | 3 | 32 |
| **6** | 189 | 56 | 245 | 3 | 35 |
| **7** | 120 | 24 | 144 (+86) | 3 | 19 |
| **8** | 173 | 67 | 240 | 0 | 9 |
| **9** | 345 | 82 | 427 | 0 | 9 |
| **10** | 422 | 73 | 495 | 0 | 14 |
| **Total** | **2099** | **601** | **2700** | **18** | **339** |

# E.4 CCF East – Carnivore Conflict Field Station

## E.4.1 Human-Wildlife Conflict Incidents

During 2024, the CCF East team responded to 12 reports related to human-wildlife conflict (HWC) (Table 1). Among these, 6 incidents involved cheetahs, four involved leopards, and one involved a pangolin.

*Table 36: Human wildlife conflict (HWC) incidents for 2024.*

| Date | Reporting type | Predator species | # Adult M | # Adult F | # Adult unknown | # Cubs M | # Cubs F | # Cubs unknown |
|---|---|---|---|---|---|---|---|---|
| **18-Mar-24** | Predator Killed | Cheetah | 1 | | | | | |
| **4-Jun-24** | Predator Killed | Cheetah | 1 | | | | | |
| **25-Jul-24** | Predator Killed | Leopard | 1 | | | | | |
| **26-Apr-24** | Predator Rescue | Cheetah | | 1 | | | | |
| **27-Jun-24** | Predator Rescue | Pangolin | | 1 | | | | |
| **31-Aug-24** | Predator Rescue | Leopard | | 1 | | | | |
| **31-Dec-24** | Predator Rescue | Cheetah | | 1 | | | | 4 |
| **22-Jan-24** | Report Losses | Cheetah | | 3 | | | | |
| **22-Jan-24** | Report Losses | Leopard | | | 1 | | | |
| **1-May-24** | Report Losses | Leopard | | | 1 | | | |
| **19-Aug-24** | Report Losses | Cheetah | | | 2 | | | |
| **18-Sep-24** | Report Losses | Cheetah | | | 3 | | | |

The CCF East team was involved in the rescue of 6 cheetahs (two adult females and four cubs), one leopard, and one pangolin that was confiscated from poachers. The two adult female cheetahs, both fitted with Early Warning System radio collars, and the four cubs were released back onto farmland.

Two cheetahs were killed; one young male was killed by a truck on the B6 road between Gobabis and Windhoek, and one male cheetah (Janus AJU 2164, AWT Collar Id 6554) was legally hunted by a professional hunter.

On June 27, 2024, the Manager of Sandune Lodge, in collaboration with the Ministry of Environment, Forestry, and Tourism (MEFT), requested the assistance of CCF East with the translocation of a confiscated pangolin. The animal had been recovered from a poacher who attempted to sell it to the lodge manager. Mr Johan Viljoen collected the pangolin from Sandune Lodge with the necessary permit from MEFT Gobabis, and arranged with Dr. Kelsey Prediger of the Pangolin Conservation and Research Foundation, to meet up along the C30 road to hand the animal over to her. The rescued female pangolin was eventually named "Hope" (Figure 1), and has been doing very well after being released in a safe area.

## E.4.2 Cheetah Rescues

### AJU 2209 – IR-SAT Tag 8511 - Adult Female, named Ryan

On 11 July 2024, the CCF East team received a report of an adult female cheetah (Figure 2) trapped on a farm following a human-wildlife conflict incident with calve losses. The farmer also mentioned his worker had reported seeing tracks of two or three small cubs.

*Figure SEQ Figure * ARABIC 2. Adult female cheetah trapped on farmland on 11 July 2024.*

Dr. Winterbach relayed this information to MEFT Gobabis, who approved the request to keep the adult female in the trap cage for a few days to attempt to capture the cubs. Two additional trap cages were placed on either side of the female's cage for this effort. The female cheetah was provided with ample water, shade, and fed game meat every morning.

On 13 July 2024, efforts to capture the cubs remained unsuccessful and the farmer agreed for the CCF East team to adjust the trap cages to improve the chances of capturing the cubs and to set up two remote camera traps, one facing the water trough and one facing the front of trap cages. On 16 July 2024, the CCF East team returned to the farm to monitor the female cheetah, and to check the images captured by the remote cameras, since the worker reported no sign nor tracks of cheetah cubs since 13 July 2024.

The camera traps did not record any cheetah cubs. Mammal species that were recorded were: warthog, red hartebeest, oryx, kudu, black-backed jackal, brown hayena and caracal. The caracal (Figure 3), visited the trap cage holding the female cheetah during the night of 14/15 July 2024.

*Figure SEQ Figure * ARABIC 3. Caracal recorded by the remote camera close to the trap cages on the night of 14/15 July 2024.*

The CCF East team returned to Gobabis, and after consulting with MEFT Gobabis, it was decided to remove the female cheetah on 17 July 2024 for the following reasons: a) no cubs were observed on the cameras, and no tracks had been seen for the past four days, b) the presence of predators, such as the caracal, captured on the cameras would likely exacerbate the female's stress, and c) a fresh injury was visible on the female cheetah's right hip and right front leg.

The CCF East team, along with MEFT Gobabis, travelled to the farm. The remote cameras were checked again for any evidence of cubs and the area around the trap cages inspected for tracks; both were negative. Efforts were made to observe signs of recent suckling by cubs around the female cheetah's nipples. However, this proved impossible due to the length of the belly hair, and the stress to the cheetah when attempts were made to approach the cage closely.

The female cheetah was placed in a travel box and transported to Gobabis Veterinary Services, where she was sedated by the veterinarian, and underwent a veterinary work-up and she was fitted with an Early Warning System (EWS) radio collar. She weighed 39.5kg and was estimated between 4½ and 5 years old.

The female suffered some minor trauma wounds, mostly superficial scrapes, which were treated by the veterinarian. She also had a healed scar on her left hind leg across the knee area

(Figure 4), which indicated she had suffered a fairly severe wound in the past, possibly caused by a wire.

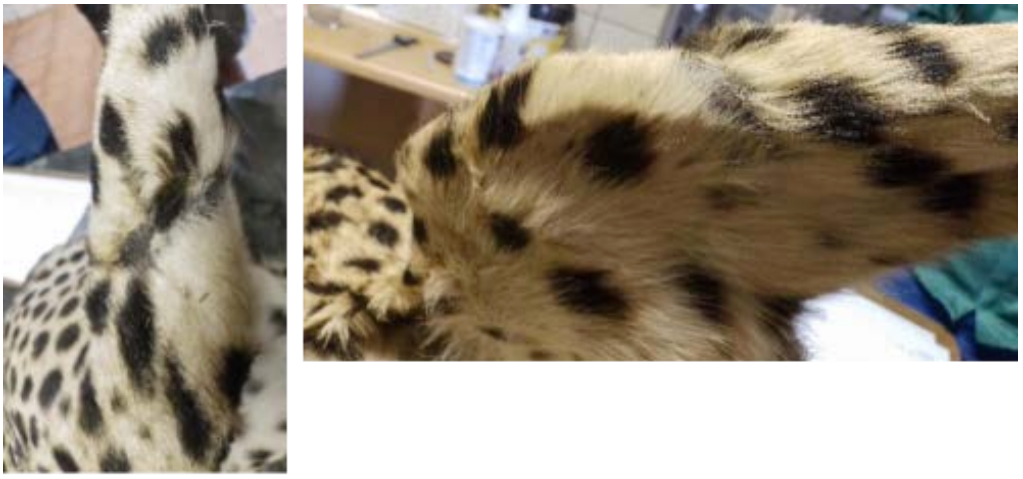


*Figure SEQ Figure * ARABIC 4. Healed scar on the left hind leg across the knee area.*

On examining the abdominal area, clear signs were observed of the female cheetah nursing cubs from her nipples, and she was still lactating. This suggests that at the time of her capture, the female most probably had cubs. With permission from the farmer, the CCF East team returned to the farm on 18 July 2024 to search selected areas for the cubs using a dog and a recording of a mother cheetah calling her cubs, but the search was unsuccessful.

The female cheetah was successfully released on a farm about 80km from where she was trapped, with the kind permission of the farmer who named her Ryan. Since her release, the female has explored beyond the confines of the farm where she was initially set free.

## AJU 2212 – IR-SAT Tag 8502 - Adult Female, named Mina – and Cubs AJU2213 – AJU2216

On 30 December 2024, the MEFT Gobabis office contacted the CCF East team regarding a female cheetah with four cubs trapped on a farm.

The CCF East team, accompanied by a Warden of MEFT Gobabis and a member of the Protected Resource Sub-division, drove to the farm to pick up the cheetahs.
All the cheetahs, except for one cub, were in standard trap cages, covered with conveyor belt sheets and sand for shade, and were provided with water and pieces of game meat.
One cub (AJU2213, male) was transferred to a metal box the previous evening. The box had no cover against the sun and was quite hot inside by the time the cub was rescued (Figure 5). Although the other cheetahs had eaten the meat they were given, Cub AJU2213 did not eat the food provided.

These metal boxes should not be used for keeping trapped cheetahs; there is no air flow and the heat building up inside the box can be fatal for the animal. In addition, it is extremely

difficult to move a cheetah from the metal box to a travel crate, and the increased effort required increases the stress the animal is already under.

*Figure SEQ Figure * ARABIC 5. The metal box (left) where the male cub AJU2213 (right) was placed overnight.*

Three cubs were loaded into a trap cage covered with shade cloth and loaded onto the MEFT Gobabis vehicle, while the adult female and one cub were each loaded into the two wooden travel crate and loaded onto the CCF East vehicle (Figure 6).

*Figure SEQ Figure * ARABIC 6. Three cubs were moved into the covered trap cage (left) and the adult female and one cub were moved into two travel boxes separately (right).*

The cheetahs were all cooled down with water poured through the shade cloth and openings, allowing them also to lick some of the water up. The cheetahs were taken to Gobabis, where all five cats were immobilized by Dr. C. Lichtenberg (veterinarian) for medical work-ups and sample collections. The cheetahs were all in good condition, alert and feisty, except for the cub that was kept in the metal box. This cub (AJU2213) was thin, but not emaciated, and dehydrated. Ringers IV fluid were administered to all five cheetahs.

After the veterinary work-ups, the cheetahs were placed back into the covered trap cage and travel boxes and woken up by Dr C Lichtenberg. It was the last day of 2024, and the team who assisted at the veterinary office were all tired, but happy that these five cheetahs were going back to roam free (Figure 7).

*Figure SEQ Figure * ARABIC 7. The veterinary team, MEFT Gobabis team, and the CCF team, together with volunteers, who assisted in collecting samples from the five cheetahs.*

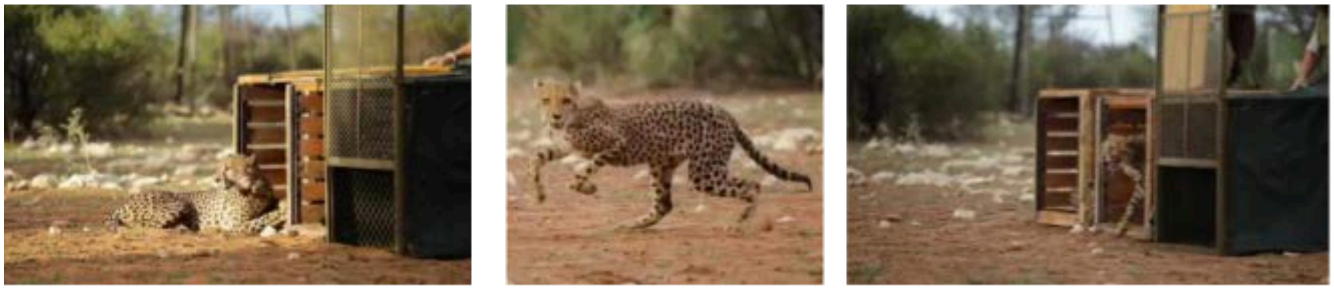


*Figure SEQ Figure * ARABIC 8. Images of the release of the adult female (AJU2212) and her four cubs.*

The CCF East team together with the MEFT Gobabis team transported the cheetahs to their new farm where the cheetahs were all successfully released (Figure 8).

## Cheetahs Died

### IR-SAT Tag 6555 – Adult female, named Scarlett

On Friday, 26 April 2024, CCF East received notification from a farmer that a collared female cheetah was discovered dead near a waterhole on his farm. No bite wounds or signs of bullet wounds were noticed. As a precautionary measure, the farmer removed the radio collar and buried the carcass due to concerns that the cheetah may have been poisoned, potentially posing a risk to brown hyenas if they were to scavenge it.

This female cheetah was trapped on a farm on 30 May 2023 due to a human-wildlife conflict incident, having killed a goat. The farmer is part of Cheetah Conservation Fund's (CCF) Early

Warning System (EWS), and agreed she could be fitted with a EWS radio collar and released again. However, on closer examination at the veterinary practice, Gobabis, it was noted the female cheetah had a severe injury to her left thigh and peritonitis in the abdominal cavity

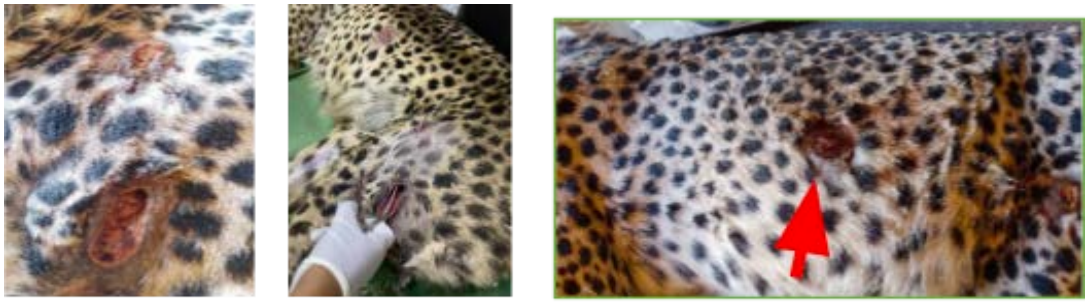


*Figure SEQ Figure * ARABIC 9. Injury on the left thigh (two pictures on left) and the puncture wound on the side of the stomach (picture right) of female cheetah EWS Tag 6555.*

from a puncture wound (Figure 9). The female was estimated to be 7 - 8 years old at that time, based on tooth wear.

As the cheetah could not be released on farmland with these injuries, she was transported to CCF Otjiwarongo to receive veterinary care for her wounds. The female cheetah was fitted with a EWS radio collar (Tag 6555), and released on farmland again on 8 September 2023. She was named Scarlett.

Scarlett was monitored by the Early Warning System project until she died. The CCF East team visited the farm to retrieve the carcass and collect any samples still obtainable. Although decomposition has started, the remains were still fairly in tact with organs and red muscle still present (Figure 10).

*Figure SEQ Figure * ARABIC 10. Remains of the adult female cheetah Tag 6555.*

The stomach contained no prey remains, which suggests the cheetah has not eaten any substantial prey within 12 – 48 hours. In addition, very little fecal content was present in the colon. This is unusual as the cheetah entered the game ranch on the 22nd of April, which is a well-stocked game ranch with around 300 springbok and various other prey species such as impala, steenbok, duiker, and waterbuck calves. If the cheetah had succumbed to organophosphate poisoning (which would have been fast), one would expect finding some prey remains still present in the stomach. The stomach was exposed to flies, with the

expectation that some would die from the poison (if present), yet none did. The stomach lining was scraped and the contents sent for a pesticide screening.

The female cheetah's teeth were in poor condition. Only four upper incisor teeth and two lower incisor teeth were left, which would have made skinning prey difficult. Some of the upper and lower premolars were broken off at the gum line or showed signs of rotting, and the canines were short, blunt and cracked.

The body condition of the female cheetah could not be assessed due to decomposition. The cheetah was estimated to be 8 - 9 years old at time of death. Cheetahs in the wild have an average age span of 10 – 12 years. No clear conclusion could be reached on the cause of death of the female cheetah. However, the fact that there were no prey remains in the stomach and the condition of the teeth, as well as her estimated age, suggests the cheetah may have struggled to kill and consume sufficient prey to maintain life. The V&M Analytical Toxicology Laboratory Services detected no pesticides in the stomach contents (8 May 2024).

### IR-SAT Tag 6554 – Adult male, named Janus

This adult male cheetah was first caught in a trap cage on 21 Feb 2023, and with the farmer's permission and support, he was fitted with an Early Warning System GPS radio collar (Tag 6554) on 24 Feb 2023, and successfully released back onto the same farm on the same day. The male was at the time estimated to be 5-6 years old.

On 14 Oct 2023, Janus was again trapped on a farm, this time together with an uncollared male cheetah. Both cheetahs were transported, with MEFT permits, to CCF Otjiwarongo, to await the arrival of new EWS radio collars. They were both released on 31 October 2023.
On 6 June 2024, the EWS radio collar fitted on Janus indicated no movement since two days previously. Up to this date, this male cheetah's movement had been monitored by the CCF East team for 15 months. Dr. Winterbach managed to obtain the contact details of the farmer where Janus' radio collar showed his last GPS location. Dr. Winterbach contacted this farmer who reported a professional hunter on his farm had shot the male cheetah in a legal hunt with a client.

## Collaboration with MEFT Gobabis: Leopard Rescue

On 31 August 2024, the CCF East team was contacted by the MEFT Chief Warden for Omaheke, who requested the assistance of CCF East in the rescue of a young female leopard trapped on a farm.


Under the safety guidance of the Chief Warden, the young leopard was transferred from the rickety farm-made trap cage to the sturdier CCF East trap cage (Figure 11), the latter which had been covered completely by 80% shade cloth to try and keep the young animal as calm as possible during loading and transport.

MEFT Gobabis assumed responsibility for overseeing the release of the leopard.

## Some Interesting Farmer Call-In Reports

9 January 2024: a farmer contacted CCF East to report seeing an adult female cheetah with 4 cubs (~ 11 months old) next to the road on the C29, and also sent photographs (Figure 12).

*Figure SEQ Figure * ARABIC 12. An adult female cheetah with 4 cubs seen by a farmer and reported to CCF East.*

9 January 2024: a farmer contacted CCF East to report a young male leopard killed in a HWC incident. The CCF East team visited the farm and collected some samples (remains already decomposing).

13 February 2024: a farmer contacted CCF East to report his neighbour seeing three African wild dogs on his farm as they were moving through. No livestock losses occurred. This sighting was reported to MEFT Gobabis.

18 March 2024: a Gobabis resident contacted Dr. Winterbach on Monday 18 March 2024 to report a dead cheetah lying next to the B6 Gobabis-Windhoek road. The CCF East team drove to the location and found the dead cheetah; a young male estimated between 2 and 3 years old. The remains was still very fresh with truck tracks in the wet ground next to it, and it is thus presumed a truck had hit and killed the young cheetah when it tried to cross the tarred road. The CCF East team collected DNA samples.

## Early Warning System Project (EWS)

To date, the CCF East team has successfully secured the participation of 69 farmers, representing 129 farms, who have signed the Memorandum of Agreement to engage in the EWS project.

This ongoing effort involves engaging with farmers to discuss the EWS project, providing explanations on its current functionality and future developments as technological challenges are resolved.
Farmers participating in the EWS project receives automatic breach alerts on WhatsApp whenever a collared cheetah moves across the virtual boundary of their farms. Farmers who have signed the EarthRanger Memorandum of Agreement, are provided with the login details to access a dedicated EarthRanger page for farmers, on which they can monitor the collared cheetahs.

Table 37 shows the different cheetahs that have been fitted with the EWS collars and their status.

*Table 37: The different cheetahs that have been fitted with EWS radio collars since 2021 and their current status.*

| Year | Cheetah Name | Cheetah Sex | Cheetah Age at Capture | AJU | Satelite Collar ID | Date Released | Date Monitoring Ended | Length Cheetah Collared (Days) | Length Cheetah Collared (Months) | Collar status | # Farms frequented |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **2021** | **Kike** | Female | ~ 2 y | | 5069 | 30-Aug-21 | 13-Jan-23 | 501 | 18.0 | Dropped-off | |
| **2021** | **Duma** | Male | ~ 2y | | 5067 | 30-Aug-21 | 13-Jan-23 | 501 | 18.0 | Dropped-off | |
| **2021** | **Calypso** | Female | Adult | | 5071 | 30-Aug-21 | 29-Mar-22 | 211 | 7.0 | Found | ~72 |
| **2022** | **Summerdown** | Male | ~ 4y | | 5071 | 20-Jul-22 | 13-Jan-23 | 177 | 6.0 | Inactive | ~48 |
| **2022** | **Daylight** | Female | ~4-5y | | 5162 | 8-Nov-22 | 6-Jan-23 | 59 | 2.0 | Found | ~14 |
| **2023** | **Janus** | Male | ~ 5-6y | | 6554 | 24-Feb-23 | 14-Oct-23 | 232 | 8.0 | Inactive | ~26 |
| **2023** | **Sofia** | Female | ~ 6-7y | | 6555 | 4-May-23 | 29-May-23 | 25 | 1.0 | Found | ~11 |
| **2023** | **Scarlett** | Female | ~ 7-8y | | 6555 | 8-Sep-23 | 26-Apr-24 | 231 | 7.6 | Found | ~55 |
| **2023** | **Janus** | Male | ~ 5-6y | 2164 | 6554 | 31-Oct-23 | 4-Jun-24 | 217 | 7.1 | Inactive | ~23 |
| **2023** | **Janus' Brother** | Male | ~ 4y | 2197 | 6982 | 31-Oct-23 | 3-Nov-23 | 3 | 0.1 | Inactive | |

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **2023** | **Lily** | Female | ~ 5-6y | 2198 | 6979 | 28-Nov-23 | 15-Sep-24 | 292 | 9.6 | Inactive | ~64 (7) |
| **2024** | **Max** | Male | 2-2.5y | 2199 | 8081 | 27-Feb-24 | 11-Mar-25 | 378 | 12.4 | Active | ~88 (11) |
| **2024** | **Nicky** | Female | 2-2.5y | 2200 | 8082 | 27-Feb-24 | 11-Mar-25 | 378 | 12.4 | Active | ~93 |
| **2024** | **Pia** | Female | 2-2.5y | 2201 | 8083 | 27-Feb-24 | 11-Mar-25 | 378 | 12.4 | Active | ~61 |
| **2024** | **Jet-Lea** | Female | 18 mth | 2204 | 8508 | 11-Jul-24 | 11-Mar-25 | 243 | 8.0 | Active | ~14 (15) |
| **2024** | **Ryan** | Female | 4.5-5y | 2209 | 8511 | 17-Jul-24 | 3-Jan-25 | 170 | 5.6 | Inactive | ~62 |
| **2024** | **Mina** | Female | 4-4.5y | 2212 | 8502 | 31-Dec-24 | 11-Mar-25 | 70 | 2.3 | Active | ~30 |

## EWS Cheetah Summaries

**Lily (AJU2198)** was trapped on 24 Nov 2023 on Namibian farmland. She was then between 5 – 6 years old. She was released, with the permission of MEFT and another farmer, on a different farm about 110km away the same day.

Her movements were monitored for 15 months till 15 Sep 2024, when the collar stopped transmitting. Lily covered 64 farms during her roaming, and settled on 7 farms after she was suspected of having cubs (Figure 13). At her last GPS position, she was again roaming long distances and it is unsure if she still had cubs at that stage.

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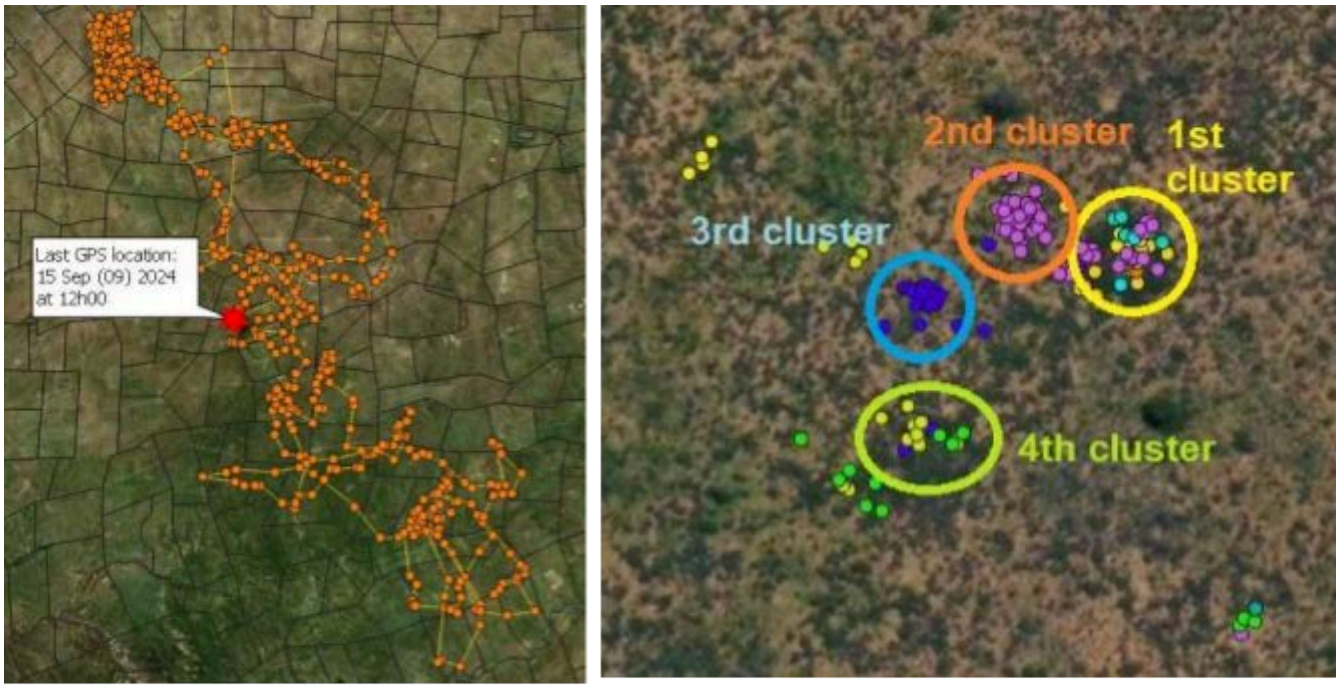


*Figure SEQ Figure * ARABIC 13. Lily AJU2198 movements from release (28 Nov 2023) till collar failed (15 Sep 2024) (left), and the clusters where she supposedly had cubs (right).*

Table 36 gives a timeline of approximate dates and events for Lily AJU2198, and Table 37 gives a timeline for the EWS IR-SAT 6979 collar performance.

*Table 38: Approximate dates for events determined by AJU2198 movements.*

| Date | Event |
|---|---|
| **24 Nov 2023** | Trapped on 1st farm |
| **28 Nov 2023** | Picked up on 1st farm, processed at vets in Gobabis, released on 2nd farm |
| **~13 Apr 2024** | 1st cluster – suspect cubs |
| **~19 Apr 2024** | 2nd cluster – 26 meters from 1st cluster |
| **~1 May 2024** | 3rd cluster – 29 meters from 2nd cluster and 49 meters from 1st |
| **~7 May 2024** | 4th cluster – 29 meters from 3rd cluster and 63 meters from 1st |
| **~8 Jun 2024** | Lily starts moving further away from den area, but move slowly with regular clustering – cubs may still be with Lily |
| **~12 :Jul 2024** | Moved further away from 4 farms she frequented while denning |
| **~13 Aug 2024** | Lily moving long distances south of "den" farm with no clusters |
| **15 Sep 2024** | Collar fails |

*Table 39: Performance problems with IR-SAT 6979 radio collar.*

| Date | EWS IR-SAT 6979 performance |
|---|---|
| **28 Nov 2023 - 21 Jun 2024** | Collar regularly transmitted data up till 16h00 on 21 July 2024, when it stopped |
| **Aug 2024** | Collar transmitted only 8 data points, from 13 to 29 August 2024 |
| **Sept 2024** | Collar transmitted only 3 data points; one each on the 5th, the 12th, and the 15th. |
| **15 Sep 2024** | Collar fails - still had 67.01% battery charge |

Farmers in the area were contacted by the CCF East team to determine if the cheetah was sighted or the collar found, but no information could be obtained.

**Max (AJU2199), Nicky (AJU2200) and Pia (AJU2201)** were trapped together on 15 December 2023. They are siblings (confirmed by the Genetics team at CCF Otjiwarongo) and were around 2 - 2½ years old at the time.

The three cheetahs were transported to CCF Otjiwarongo, where they were placed in the cheetah quarantine pens after being processed by the CCF veterinary team. No Early Warning System radio collars were available at the time, and MEFT gave permission that the cats can stay at CCF until such time they can be fitted with the radio collars before release. The three cheetahs were released on CCF's Farm Elandsvreugde on 28 February 2024.

**<u>Max (AJU2199, IR-SAT 8081)</u>**

Max roamed across 88 farms from release on 28 February 2024, until he settled down in his current home range since around 1 October 2024 (Figure 14, Table 5).
Home range is approximately 221 $km^2$.

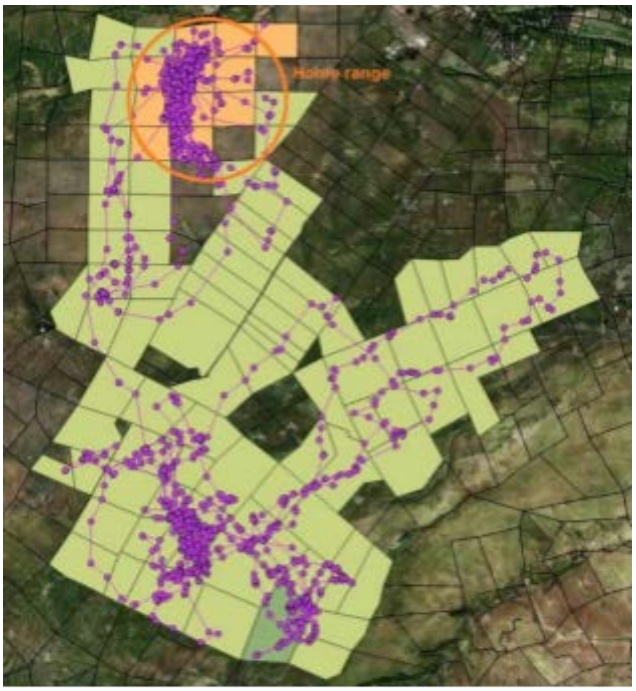


*Figure SEQ Figure * ARABIC 14. Movement of Max AJU2199 from release on 28 February 2024 until currently (26 Feb 2025).*

*Table 40: Approximate dates and events in movement of Max AJU2199.*

| Date | Event |
|---|---|
| **28 Feb 2024** | Released on Farm Elandsvreugde at CCF Otjiwarongo |
| **28 Feb – 1 Oct 2024** | Roam across 88 farms, eventually moving more northwards |
| **1 Oct 2024** | Enters area which is now his current home range for the 1st time |
| **3 Oct 2024** | Leaves current home range area and moves southwards again |
| **11 Oct 2024** | Return to current home range area |
| **15 Oct – 5 Dec 2024** | Settled his home range on 11 farms |
| **5 – 8 Dec 2024** | Went for a walk-about circle south of current home range area |
| **Jan 2025** | Max is settled in his home range, made one loop 12-13 Jan 2025 towards the south-east |
| **25 Feb 2025** | Farmer reported Max has not caused any losses, and she has also not heard that he had caused losses on any other farms where he roams. |
| **26 Feb 2025** | Battery charge = 60.65% |

## Nicky (AJU2200, IR-SAT 8082)

Since release, on 28 Feb 2025 until currently (26 Feb 2025), Nicky has roamed across 93 farms (Figure 15). Since 1 Jan 2025, she has roamed across only 16 farms (orange area in Figure 15), but no clusters, indicating the possibility of cubs, are visible.

Battery charge was 60.33% (26 Feb 2025).

**Pia (AJU2201, IR-SAT 8083)**

Since release, on 28 Feb 2025 until currently (26 Feb 2025), Pia has roamed across 61 farms (Figure 16). Since 28 Jan 2025, she has roamed across only 15 farms (orange area in Figure 16), but no clusters, indicating the possibility of cubs, are visible.

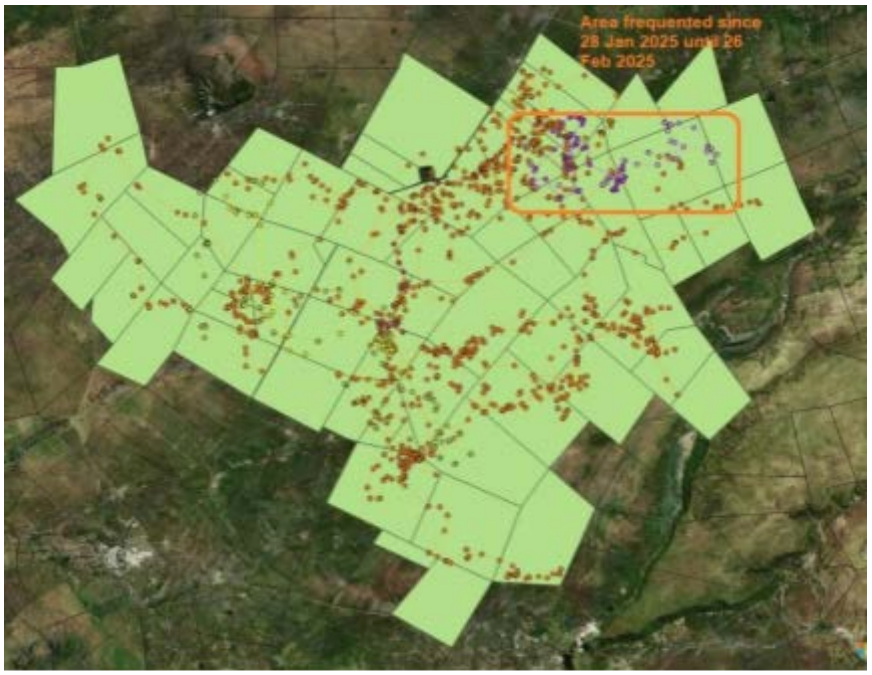


*Figure SEQ Figure * ARABIC 16. Movement of Pia AJU2201 from release on 28 February 2024 until currently (26 Feb 2025).*

Battery charge was 60.58% (26 Feb 2025).

**Ryan (AJU2209, IR-SAT 8511)**

Ryan, an adult female cheetah and approximately 4½ to 5 years old, was trapped on farmland on 11 July 2024, following a human-wildlife conflict incident where a calf was lost. The farmer who trapped Ryan reported the she may have cubs. However, all attempts to either capture or spot the cubs were unsuccessful.

In consultation with MEFT Gobabis, it was decided to remove Ryan on 17 July 2024, since a) no cubs were observed on the cameras, and no tracks had been seen for the past four days, b) the presence of predators, such as the caracal, captured on the cameras would likely exacerbate Ryan's stress, and c) a fresh injury was visible on Ryan's right hip and right front leg.

After her release on a new farm, Ryan was monitored for 5.6 months (170 days) before the collar stopped transmitting. From the release date (17 July 2024) until 1 November 2024, Ryan roamed across ~62 farms, just north of her release site (Figure 17, yellow area).

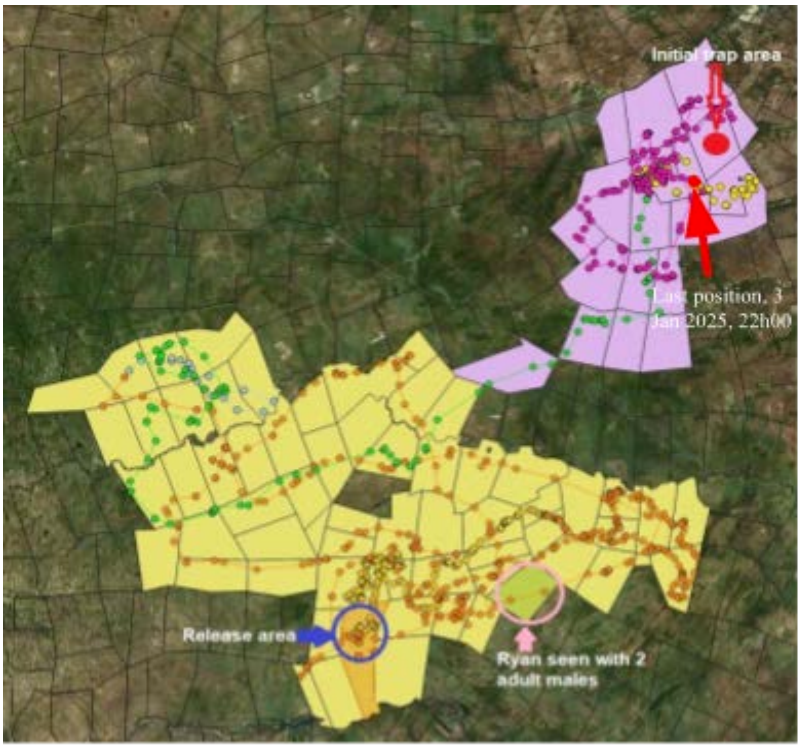


*Figure SEQ Figure * ARABIC 17. Movement of Ryan AJU2209 from release (blue circle) on 17 July 2024 to 3 January 2025 when data stopped.*

On 2 October 2024, Ryan was captured by a remote camera trap, on a farm about 24km from her release site, visiting a cheetah playtree in the company of two adult males (Figure 17, pink circle).

From 1 November 2024, Ryan starts moving north-east towards the farms where she was initially trapped. In the new area (Figure 17, lavender area), she frequented about 16 farms, although the only time she visited the farm where she was initially trapped was between 26 and 28 December 2024.
On 3 January 2025, the last GPS data point was transmitted at 22h00 (Table 6). The most likely explanation is that a farmer had killed Ryan and disposed of the radio collar. The CCF East team phoned the farmers where Ryan had last moved, but no information could be gathered.

*Table 41: Approximate dates for events determined by AJU2209 movements.*

| Date | Event |
|---|---|
| **11 Jul 2024** | Captured on farmland |
| **11 – 16 Jul 2024** | Ryan remained in trap cage, while two extra trap cages and remote camera traps were set up in an effort to determine if she did have cubs, and to capture the cubs if they came to their mother. |
| **17 Jul 2024** | Since the camera traps didn't record any cubs, and no tracks were observed in the vicinity of the trap cages since 11 July 2024, Ryan was loaded in a cheetah travel box, transported to the veterinary practice in Gobabis, processed and fitted with a EWS radio collar. |
| **17 Jul 2024** | Ryan released on a farmland about 88km from where she was trapped. |

| | |
|---|---|
| **2 Oct 2024** | Ryan was recorded on a remote camera trap from IZW, on a farm about 24km from release site, together with two adult male cheetahs |
| **~1 Nov 2024** | Ryan starts moving away from the area she has frequented since her release (her range covered about 62 farms) and moving in direction of farm where she was initially trapped. |
| **~10 Nov 2024 – 3 Jan 2025** | Ryan frequents 16 farms, and roams on the farm where she was initially trapped from 26-28 Dec 2024. |
| **3 Jan 2025, 22h00** | Ryan's collar stops transmitting data battery charge is 66.49% |

## *Livestock Guarding Dog (LGD) Program*

There are currently 28 livestock guarding dogs in the Omaheke region.

The CCF East team placed five dogs in 2024 (Table 40), and vaccinated 24 dogs during this period. Apart from the annual vaccination of the LGDs, the CCF East team also had the following occurrences, incidents and/or interventions (Table 41 and 42).

*Table 42: Livestock Guarding Dog placements in 2024.*

| **LGD Placements** | | |
|---|---|---|
| SB Number | **Date** | **Farm** |
| **SB 947** | 11 January 2024 | Placed on Farm Dawis |
| **SB 967** | 19 June 2024 | Placed on Farm Hieromtrent |
| **SB 974** | 15 October 2024 | Placed on Farm Wilton |
| **SB 976** | 16 October 2024 | Placed on Farm Berma |
| **SB 979** | 18 October 2024 | Placed on a communal farm in the Aminius district |

*Table 43: Livestock Guarding Dog Incidents Summary.*

| **Livestock Guarding Dog Incident Summary** | | |
|---|---|---|
| **Removed** | LGD removed by CCF from the farm for any of various reasons. | 2 |
| **Returned** | LGD returned by the farmer to CCF. | 6 |
| **Deceased** | LGD died due to illness, attack, or euthanised. | 3 |
| **Attacked** | LGD attacked by baboons, warthog, etc. | 1 |
| **Sick** | LGD reported sick or injured (other than attacked) – Not all farmers report these incidents. | 1 |
| Total Incidents | | **13** |

*Table 44: Livestock Guarding Dog Incidents - detailed per SB number.*

| **Livestock Guarding Dog Incidents** | |
|---|---|
| **SB 947** | The farmer was not on the farm. It was reported to him that the LGD didn't want to eat or work.<br>We fetched the dog and brought it to a veterinarian, who diagnosed it with tick bite fever. It was treated and returned to the farm.<br>The farmer carried the cost. |
| **SB 947** | A few months later the farmer reported that the LGD was attacked by a baboon.<br>We fetched the dog. It was treated and sent to CCF Otjiwarongo to recuperate.<br>The dog recently returned to the farm |
| **SB 894** | LGD was returned to CCF Otjiwarongo due to the fact that no bond could be established between her and the herd. |
| **SB 927** | LGD was returned to CCF Otjiwarongo due to behaviour problems. She would remove the lambs form the herd and hide them. According to the farmer he lost a significant number of lambs. |

| | |
|---|---|
| **SB 867** | The farmer brought the LGD in to the veterinarian due to weight loss and lack of appetite. The dog was diagnosed with severe hip-dysplasia, and returned to CCF Otjiwarongo |
| **SB 637** | The farmer called in and notified CCF East that the LGD no longer wanted to eat and was in bad shape. CCF East team fetched the dog. LGD was later euthanised.<br>Necropsy completed and samples sent to Otjiwarongo. |
| **SB 871** | The farmer originally had the LGD with his herd on a farm but move the herd and dog closer to town. This resulted in unwanted behaviour. The dog was removed from his working area after he ended up in town, and returned to CCF Otjiwarongo for a six-week period.<br>The LGD returned to Gobabis and was rehomed with a new farmer on Farm Houvas – Approximately 50 km outside town.<br>Unfortunately, the LGD didn't bond with the sheep, and also had some altercations with the farmer's dogs. He was returned to CCF Otjiwarongo to be rehomed elsewhere. |
| **SB 737** | The dog was offered to a farmer but due to his hunting on the farm was returned to CCF Otjiwarongo. |
| **SB 898** | The farmer placed two other dogs with the LGD resulting in the LGD starting to wander off and not attending to the sheep. The farmer eventually asked us to remove the dog as it would stay away for days on end. |
| **SB 921** | The LGD work well initially, however, after the farmer moved some of his sheep, the LGD left the herd and ended up on the neighbour's farm. The neighbour accused the farmer that his dog killed some of his sheep and insisted that he get rid of the LGD. |
| **SB 816** | The farmer called in and informed us that the LGD was killed by a warthog. |
| **SB 937** | The farmer called in and informed us that his LGD was bitten by a snake and died. |
| **SB 947** | Due to the drought in the region and the farm being sold, the farmer was forced to sell some of his sheep and move the rest to a relative's farm. Initially the LGD continued well, but then started to leave the flock, return home early and then killed a lamb and bit two ewes. The LGD at the same time started chasing the relative's exotic black springbuck, resulting in strained relationships. The relative instructed the farmer to remove the dog.<br>The LGD has been returned to CCF Otjiwarongo to be rehomed. |

# F. Global Management Planning & Policy Involvement

CCF assists in international programme development and adapts model programmes developed in Namibia for use in other countries, distributing its materials and information throughout Africa and the rest of the world.

## F.1 International Cheetah Studbook

Dr. Laurie Marker is the International Cheetah Studbook Keeper. The International Cheetah Studbook is a voluntary register of all cheetahs in the world held in both zoological and private facilities, and providing information about existing animals by publishing the studbook contents, thus creating the preconditions for selecting breeding animals. The Studbook records captive animals from around the world. It includes wild-caught and captive-born individuals alive in 1980 and after, as well as founders with live offspring since 1980. Each registered animal has a studbook number. Bi-annual questionnaires are sent to all facilities holding cheetah and information is checked through the support of the Zoological Information Management System (ZIMS Species360) and personal communications.

The 2023 studbook was published in June 2024. In 2023, 157 (68.61.28) new animals were registered, representing births and newly imported wild-caught animals during this period. Captive-born cubs from known breeding facilities totaled 115 (42.45.28) born in 32 litters in 21

facilities in 10 countries. There was a total of 161 (74.63.24) deaths reported in 2023, including cub deaths. The captive cheetah population on 31 December 2023 was 1796 (893.899.4) animals in 307 facilities in 44 countries.

The 2024 studbook is currently in progress. So far in 2024, there have been 187 (90.75.22) new animals registered. Of these, 126 (58.48.20) were captive births at 23 institutions globally. So far in 2024, there have been 164 (87.61.16) deaths reported at 83 institutions. The captive population is approximately 1805 (890.907.8) animals at 306 institutions globally.

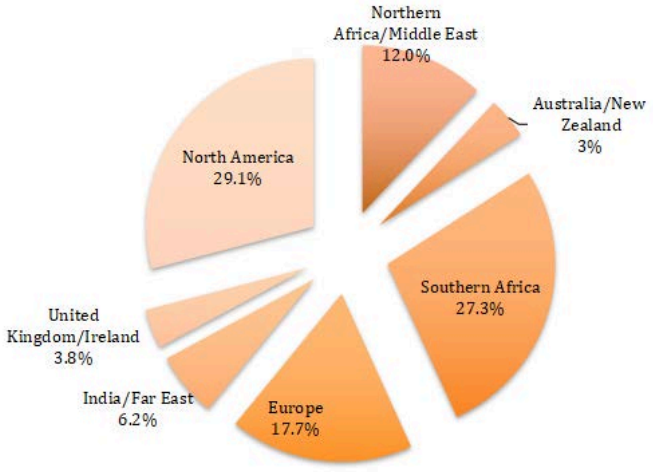


*Figure 76: Captive cheetah populations by region, 2023: 1796 (893.899.4).*

# F.2 Illegal Wildlife Trafficking (IWT)

## F.2.1 Confiscations

### Confiscations and Other IWT Events

During 2024, CCF recorded only three events related to cheetah poaching, trade, and trafficking in the Horn of Africa, involving 6 cheetahs. These events took place in Somaliland and, for the first time, in Puntland:

One case involving three cubs took place in Puntland;

· Two cases involving a total of three cubs occurred in Somaliland.

Puntland

For the first time, CCF became involved with a confiscation in Puntland. This was likely the direct result of CCF's ongoing efforts to build a working relationship with the Puntland wildlife authorities (see below). CCF received a report in late February that authorities in Garowe were holding three small cubs that had been confiscated within the previous seven days. One had already died at the time of the report, and a second died while CCF was

working on surmounting political and bureaucratic obstacles, but the third cub was successfully transferred to CCF custody and is in good health at the Cheetah Center.

Somaliland

No confiscations were reported in Somaliland during 2024. Authorities reported one incident in April where two cubs were "almost" confiscated, but the enforcement attempt was ultimately unsuccessful. No information is available about the fate of the cubs involved. One cub voluntarily surrendered to the Ministry of Environment and Climate Change (MoECC) in May and is now in the custody of CCF at the Cheetah Center.

*Table 45: IWT Events 2024*

| Date of Confiscation | Type of Event | Country of confiscation | Number of animals involved | Species | Sex | Age |
|---|---|---|---|---|---|---|
| 17 February 2024 | confiscation | Puntland | 3 | *Acinonyx jubatus* | Male (2)<br>Unknown (1) | 3 weeks |
| 23 April 2024 | report | Somaliland | 2 | *Acinonyx jubatus* | Unknown | Unknown |
| 20 May 2024 | surrender | Somaliland | 1 | *Acinonyx jubatus* | Male | 6 weeks |

*Table 46: Cheetahs in IWT 2024*

| Unique Identifier | In-House Assigned Name | Sex | Date of Event | Origin | Event Type |
|---|---|---|---|---|---|
| ITAJU 2136 | Rama (Romo) | M | 17 February 2024 | Puntland | Confiscation |
| N/A | * | M | 17 February 2024 | Puntland | Confiscation |
| N/A | * | U | 17 February 2024 | Puntland | Confiscation |
| N/A | + | U | 23 April 2024 | Somaliland | Report |
| N/A | + | U | 23 April 2024 | Somaliland | Report |

| | | | | | |
|---|---|---|---|---|---|
| ITAJU2138 | Madar (Mader) | M | 20 May 2024 | Somaliland | Surrender |

**Notes:**

*Died in Puntland before transfer to CCF custody

+ Report only – not confiscated

*Table 47: Overview of IWT Events 2024*

| **IWT Events** | |
|---|---|
| Total IWT events | 3 |
| Total confiscation events | 1 |
| Total "reports only" events | 1 |
| Total Other Events | 1 |
| Total cheetahs confirmed to be in trade (confiscated + reported but not confiscated) | 5 |
| Total confiscated | 3 |
| · Ethiopia | 0 |
| · Puntland | 3 |
| · Somaliland | 0 |
| Alive on Arrival at CCF Center | 2 |
| Dead on Arrival | 0 |
| Confiscations Mortality Rate upon confiscation (n=3) | 67% |
| Died at CCF after confiscation during 2024 | 0 |
| Confiscations Mortality Rate at CCF (n=2) | 0% |

## Analysis

The number of IWT incidents continued to decline in 2024. Somaliland authorities reported only one unsuccessful confiscation attempt during this period involving two cubs, a significantly lower rate than in 2023, when eight incidents were recorded over the entire year. This is a welcome development, although the reason for it is not fully clear. More effective enforcement is one possibility. CCF's community outreach and education programs could be having a positive impact. Other external factors could also be involved. More information is needed to establish a direct causal link. Ecological surveys to determine cheetah distribution

and habitat, and social surveys in target communities conducted under CCF's current suite of projects (see below) will help create a more comprehensive data base for analysing trafficking trends in Somaliland and the Horn of Africa region.

As for Puntland, it is not known whether the single confiscation represents a typical level of IWT, or whether increased enforcement efforts would reveal more illegal activity. It is a positive sign, however, that the Puntland authorities are willing to partner with CCF to conduct surveys that should help establish a better baseline for the region.

## Demand Reduction: Strategies and Outreach

CFF's Global Cheetah Summit (see Section E below) in January included a session on demand reduction. Discussion addressed the need for an approach that is not just focused on shaming and punishment but includes positive strategies such as education and social change programs and public outreach to empower people to become champions for wildlife instead of consumers of it, as well as new laws and guidelines that facilitate these strategies.

CCF partnered with Wild Africa Fund and its founder, well-known conservationist and media expert Peter Knights, to develop and implement a public media outreach campaign in Somaliland. The campaign involved television, radio, billboards, and social media programming including interviews with prominent Somalilanders in government, private sector, arts/entertainment, and other influencers. The campaign's purpose was to strengthen public understanding and support for the importance of cheetah conservation and the need to stop IWT. CCF and WAF formally launched the campaign with a high-level media event in Hargeisa in May 2024.

In April, CCF worked with the Ethiopian Wildlife Conservation Authority (EWCA) to engage a world champion Ethiopian distance runner, Gotytom Gebreslase, as a cheetah ambassador. With guidance and support from EWCA and CCF she will use her athletic competitions, public appearances, and social media activities to advocate for keeping cheetahs in the wild.

In December CCF concluded an agreement with Go Insight to share information on cheetah trade and contribute to the CatByte database. CatByte is a new initiative aimed at combating poaching, trade, and trafficking of big cats worldwide. It is intended to serve as a centralised hub for collecting, analysing, and visualising the dynamics related to big cat related crime, with a focus on understanding the scope, scale, and nature of legal and illegal trade activities. CatByte endeavors to capture all information on trade (legal or illegal) collected by NGOs or governments and offer direct assistance to conservation organisations, wildlife law enforcement, and policy experts working to combat threats against big cats.

CCF continues to work on developing its knowledge base about the exotic pet market for cheetahs, including online sales. This effort includes expanded online surveys, more in depth monitoring of identified websites, further work to accurately quantify and identify individual animals linked to specific websites, additional research to understand the motivations and behaviour of users and their preferences for exotic pets and continued public awareness campaigns. A better understanding of the status and dynamics of illegal cheetah trade is

critical to demonstrating the impact of current project activities and devising strategies for future efforts.

## Research/Genetics

Funding from the U.S. Fish and Wildlife Service project (below) will enable CCF to continue genetic sample analysis for confiscated cubs in the Horn of Africa. In addition we will start collecting wild cheetah scat samples with this funding, which will allow us to keep learning about the origin and genetic makeup of the cats affected by the illegal trade and expand baseline knowledge about the population of cheetahs in northeast Africa. The analysis will be based on scat samples of known location, which will also be analysed to establish the prevalence of livestock predation, which is a key indicator for human-wildlife conflict. This will aid in determining potential locations for CCF's training programs such as Future Farmers of Africa. A more comprehensive genetic database will also provide stronger forensic evidence for wildlife crime prosecutions in the region. CCF's project plans include training prosecutors and judges on the value and use of genetic evidence in IWT cases.

## *CCF Projects*

At the beginning of 2024 CCF had a full portfolio of grants from government and private sources. A number of these grants concluded over the course of the year. CCF is actively seeking follow-on grants or grants from new partners to provide continued funding for IWT activities.

LICIT-II Project (IWT-113) - Legal Intelligence and Community Governance for Cheetah Illicit Trade

UK/DEFRA awarded CCF a grant for the "LICIT-II" project (Legal Intelligence and Community Governance for Cheetah Illicit Trade) in 2022; the project will run until June 2025. LICIT II, for which CCF is the lead partner, continues CCF's productive relationship with Legal Atlas, as well as engaging a new partner, TRAFFIC. LICIT-II counterparts include national government authorities, regional networks, and local communities. Project goals are to enhance national and regional capacity in the Horn of Africa to fight wildlife crime by leveraging gains made through the previous "LICIT-I" project and synergies with other current CCF projects (see below) in three main areas:

WILDLIFE CRIME DATA COLLECTION & EXCHANGE PLATFORMS:

*Working with TRAFFIC, develop a TWIX information platform for Ethiopia.* TWIX (Trade in Wildlife Information eXchange) is a data platform for wildlife crime information and intelligence sharing among governments, developed by TRAFFIC, that is operational in the European Union and among the SADC counties in Southern Africa. A multi-stakeholder initiative is underway to establish an East Africa regional TWIX that will cover the IGAD member countries and Tanzania. The LICIT II work has now connected Ethiopia with this

expanding regional platform to facilitate communication and cooperation against cross border cheetah trafficking and other wildlife crime.

*Develop a TWIX-compatible database for wildlife crime incidents for Somaliland.* Because Somaliland has not yet achieved recognition as a fully sovereign country, it is not eligible to participate in the East Africa TWIX. However, Somaliland can still collaborate with its neighbors to fight wildlife crime and will benefit by having an information exchange platform compatible with other countries in the region. TRAFFIC prepared a draft template and guidelines for a TWIX-compatible Somaliland database. CFF engaged a consultant who has been building the Somaliland database. CCF obtained a free two-year license for SemanticAI software to be used in Somaliland to support the database and has provided laptops for use by approved Somaliland government database operators.

STRENGTHENING LEGAL FRAMEWORKS TO COMBAT CHEETAH TRAFFICKING:

*Working with Legal Atlas, Revise Somaliland's Wildlife Law.* The draft new Somaliland Forest, Grazing, and Wildlife Act prepared by the government-appointed drafting committee with guidance from the project legal consultant, Legal Atlas, and CCF's IWT staff was delivered to the MoECC at the end of 2023. The text is currently awaiting approval by the President's cabinet of ministers before being referred to Parliament. It is uncertain when the cabinet will act on the proposed law. Somaliland has national elections scheduled for November 2024, which could act as a forcing event or a cause of further delay.

*Draft an IGAD-level regional protocol on Environmental Crime Units (ECUs).* An ECU is a multi-agency government task force for coordinating responses to wildlife trafficking and other environmental crimes. Legal Atlas prepared a benchmark study analyzing global legal standards applicable to the structure and functioning of ECUs in 2023 and used this research to produce a Drafting Guide for IGAD-member governments. This work was intended to be coordinated through the Horn of Africa Wildlife Enforcement Network (HAWEN), an organ of IGAD. Due to capacity and process issues within IGAD and the HAWEN, however, CCF and Legal Atlas have not yet presented this work to IGAD or its member states. Recent developments that should strengthen the functionality of the HAWEN and clarify the process of working with IGAD should help determine how to move forward with this work. This element of the LICIT II project builds directly on achievements of the first stage of the CCF/CMS Legal Harmonization project and parallel work on a Somaliland ECU (see below).

COMMUNITY NATURAL RESOURCE GOVERNANCE UNITS:

*Develop a pilot Community-Based Natural Resources Management (CBNRM) governance unit in the Awdal region of Somaliland, training governing bodies in Future Farmers of Africa (FFA) and governance principles.* After developing a CBNRM model suitable for communities in Somaliland CCF used the model to recommend five potential conservancy sites to the Ministry, which selected an area including 29 villages centered on the communities of Bown and Harirad in Somaliland's Awdal Region as the location for the pilot conservancy.

CCF collected data from this pilot area to establish a monitoring and evaluation (M&E) baseline for future project activities and conducted a pre-assessment for providing training under CCF's Future Farmers of Africa program. FFA training began in 2023 and was given to 153 additional beneficiaries in the first six months of 2024. In September CCF organised and delivered six more FFA training workshops to a total of 90 individuals from the pilot conservancy community. This brought the total of FFA beneficiaries to 244 out of a project target of 250. Data analysis on the impact of these and previous FFA workshops is in process. Further workshops could be scheduled if time and resources permit.

CCF, assisted by project legal consultant, completed the process of obtaining Free Prior and Informed Consent (FPIC) from 27 villages located in the pilot conservancy area in the Awdal region, as the initial step toward building a community conservation governance structure. CCF and Ministry of Environment and Climate Change (MoECC) staff engaged with five individuals/groups in each village consisting of the village Head and representatives of women, youth, the elderly, and people with disabilities. The process was held in October and November 2024 and involved three rounds of meetings: an initial meeting to explain the FPIC process followed by a two-week period to allow the representatives to consult within their villages. A second round of meetings was held to receive feedback, which was used to inform drafting of the FPIC agreement. The third and final set of meetings was held to take the village representatives through the draft agreement and, when they were satisfied with it, obtain their signatures. All signed, allowing their villages to participate in the governance scheme.

*Continue developing the Somaliland Association of Civil Society Organizations (SACSO) as a support coalition for CBNRM governance units.* SACSO currently includes about a dozen national and international NGOs with community development initiatives in Somaliland. When fully functional the SACSO is intended to provide support for community-based conservation activities including conservancies by linking conservation with other areas of community development activities. SACSO will also serve as a vehicle for encouraging coordination and cooperation among its members and provide CCF with a roster of potential partners for future projects and cooperative activities. SACSO was established in Year One of the project, however CCF has continued to support its development and functioning, as its member organizations are important stakeholders in the community resource governance process due to their community development work. CCF convened a SACSO meeting in July 2024 to discuss elements of the community conservancy initiative and brief members on the upcoming FPIC process.

EUROPEAN UNION, "Engaging Somali communities to improve wildlife trafficking and forest crime control" (2022-2024)

This project concluded at the end of June 2024. CCF partnered with Deutsche Welthungerhilfe (World Hunger Help/WHH), on a European Union-funded project to merge community development initiatives with established anti-trafficking and protected area methodologies to reduce wildlife trafficking and forest crime. This project tested the idea that communities will more readily accept wildlife conservation initiatives if they are integrated with other, more traditional community development activities. This was also the first time CCF received funding from the European Union - an important opportunity for CCF to establish itself with this major donor. WHH was the lead partner for the project.

The project focused on five villages, chosen with input from the MoECC, along the Somaliland-Ethiopia border in an area previously identified as impacted by cheetah trafficking. WHH built community water systems and created livelihoods through bee keeping operations, while CCF brought anti-trafficking and wildlife conservation initiatives to the communities. CCF-led activities during the final months of the project included:

*Launching the SACSO coalition* to support community resource governance initiatives. This action was shared with the LICIT-II project (see above) and drew resources from both projects; As discussed above, SACSO was formally launched in early 2024;

*Developing the Somaliland Environmental Crime Unit (ECU)* as a coordinating body for government responses to wildlife crime. At the end of this reporting period, work to develop the SECU is largely completed, however the SECU will not be fully operative until the new Somaliland wildlife law (above), which provides a legislative basis and legal framework for the SECU, is enacted by Somaliland's Parliament.

*Community Wildlife Observers* CCF worked with the MoECC to identify two wildlife observers in each of the five project villages, who were hired directly by the MoECC using project funds transferred for that purpose. CCF trained the observers to monitor wildlife and wildlife crime/human-wildlife crime incidents in their communities and to record and report information on what they had seen. At one point in 2023 these observers were able to provide information to the MoECC that contributed to the arrest of six traffickers and recovery of two cubs. Data collected by the observers will feed into the national database under development through the LICIT II project (see above);

*Revising the Somaliland Wildlife and Forestry Law*. This work was also shared with the LICIT II Project (see above) and was led by project partner Legal Atlas;

*Conducting eco-social surveys and training* in the five project communities. Over the course of the project CCF provided the five villages with training in animal husbandry techniques including predator management and avoiding human-wildlife conflict under CCF's Future Farmers of Africa (FFA) program. FFA is a key element in persuading communities to take an active role in protecting cheetahs and other wildlife. Training also covers the benefits of wildlife resources, and how integrating livestock husbandry and wildlife management can decrease losses of both livestock and wildlife, improve productivity of pastoral livelihoods, sustainability of natural resources in the target communities, and reduction or elimination of wildlife crimes including illegal trafficking, hunting, poisoning and trapping. CCF followed up with refresher FFA training in all five communities to review and reinforce the concepts and lessons from the initial training.

At the close of 2024 CCF was working with WHH to prepare the final project report. Both the EU and WHH have responded positively to CCF's expression of interest in continuing to work together.

U.S. Fish and Wildlife Service: Creating systems to monitor and care for wild cheetahs and determine drivers of illegal trade in the Horn of Africa

CCF received funding from the U.S. Fish and Wildlife Service through its Species Conservation Catalyst Fund. This was the result of a long policy development process at USFWS, which included input from CCF and other NGOs. The USFWS grant began in 2022 and runs for five years, with the final two years contingent on renewed USFWS funding. This project involves activities in the Ethiopian SRS, Puntland, and Somaliland with the goal of allowing these governments to combat trafficking and conserve biodiversity in the region more effectively, including through cross-border collaboration. For CCF, the project brings together the Wildlife Crime, Genetics, and Ecology Programs in a joint endeavor covering the following areas of work:

*Camera trap surveys* in Ethiopia's Somali Regional State (SRS), Puntland, and Somaliland to gather better data about cheetah distribution and abundance in these areas. As of this report date, the CCF field team is preparing to undertake the first surveys in Somaliland in collaboration with the local government. An outreach trip that involved visiting some of the rural communities to be included in the survey area has been completed. We aim to survey cheetahs for three months in the dry season and to involve people from local villages in the project by providing incentives to facilitate the survey, most notably as field guides due to their knowledge of the remote area that the survey will cover. The data will be analyzed by a postdoctoral fellow at Cornell University (USA), a Ph.D. student at the Namibia University of Science and Technology (Namibia) and several M.Sc. students. An important aspect of the project is the training of local government personnel in wildlife surveys to empower them in trend monitoring of cheetah populations.

*Genetic sample collection and analysis* for wild populations and confiscated cubs to learn more about their origin and genetic makeup. This data will also support wildlife crime prosecutions in the form of forensic evidence. To date genetic samples obtained by CCF from cheetahs recovered from illegal trade have been processed at the CCF Genetics Laboratory in Namibia to obtain a mitochondrial and genomic (microsatellite) signature of each trafficked cheetah. These samples will become the starting point for a larger regional genetic database. Additionally, genetic sequences of relevant prey species have been gathered and combined for a joint analysis to help identify ideal target regions for a prey assay development. Primers targeting specific taxonomic groups were designed and are currently being tested.

*Training for Ethiopian Veterinarians:* CCF's Ethiopia partner for this project, BeWildAid, an NGO originally chosen by the Ethiopian government to establish an Ethiopian National Wildlife Veterinary Service (EWVS), shut down its operations without notice and left the country. Absent another suitable partner CCF worked with USFWS and EWCA to restructure the project activities and budget for Ethiopia, and collaborate more directly with

EWCA, Ethiopian regional authorities, and Ethiopian veterinary organizations. Before BeWildAid dropped out of the project, proposed activities included:

- Preparing instruction modules for the EWVS Conservation Medicine online course;

- Compiling a Confiscation Veterinary Bag supplies list, including identification of vendors who could reliably supply these items;
- Creating a hotline reaching the Ethiopian Wildlife Veterinary Service (EWVS).

The revised plan of activities focuses on disseminating the instruction modules prepared by CCF through other channels and providing a practical training program at CCF facilities in Somaliland to selected Ethiopian veterinarians. The veterinary bag and hotline activities were judged no longer feasible and were dropped. The practical training program brought four trainees to the CRCC on December 19th, 2024. Two were from EWCA and two from the SRS. The course was taught by the current CCF staff veterinarians Dr. Mariana Gomez and Dr. David Fletcher and covered the following topics: Cheetah Conservation Overview, Common Pathology Presentations, Cub Confiscations, Basic Cub Care, Refeeding Syndrome, Preventative medicine, Bandaging Techniques, Clinical Exam and Handling for Cheetahs, Basic Medical Techniques for the Cheetah, Wound Care and Applicable Techniques, Clinical Confiscation Cases, Emergency Care for Cheetahs, Feline Viral Diseases, Cheetah Emergency Recall Practice, Rabies and Distemper, Fecal Examination and Parasites, and Common Medications and Supplements. Follow up assessment with trainees revealed the beneficial contribution of this training to their day-to-day work. Together with a fifth veterinarian trained separately during the project's first year, these four trainees are now members of a list of veterinarians and experts who can be called upon by Ethiopian authorities in cases of cheetah cub confiscations to provide emergency and critical care until the cubs are permanently placed in a sanctuary.

CMS-IGAD Legal Harmonization Project

This project concluded in September 2024. CCF and Legal Atlas, with support from the Convention on Migratory Species (CMS) Secretariat pursued an initiative on legal harmonization in the Horn of Africa region funded through the EU "Cross-Regional Wildlife Conservation in Eastern and Southern Africa and the Indian Ocean" Program. This effort focused on developing a legal framework for a regional network of Transfrontier Conservation Areas (TFCAs), as a means of facilitating cross-border collaboration between countries in the IGAD region and enabling protection of important ecosystems that extend across national boundaries. Legal Atlas conducted research on legal standards and instruments applicable to potential TFCAs in the IGAD/HAWEN region and produced a guideline document. The analysis included IGAD member countries Djibouti, Ethiopia, Kenya, Somalia, Sudan, South Sudan, and Uganda. The next phase of the project was to have involved development of a draft regional protocol based on the analysis. Due to issues with IGAD, however (see below), the approach had to be refocused to drop the proposal for a draft instrument. Instead, CCF and Legal Atlas used remaining project time and funds to conduct a series of national level consultations with IGAD member countries with the goal of building a consensus for a regional TFCA network and a new approach to achieve it, before the project

period ended in September 2024. This work was successful, creating a baseline for further efforts. CCF has filed the final report, and expects to hold discussions with CMS and Legal Atlas on a possible follow-on project. This project was closely integrated with work under the LICIT II project (above) as part of an initiative to strengthen the regional legal framework to facilitate greater collaboration against cross-border IWT in the Horn of Africa.

IUCN Grant

This grant ended on 28 June 2024. Over the past two years IUCN provided financial support for IWT work to "mitigate human-wildlife conflict and eradicate illegal trade in cheetah while building resilience and creating better livelihoods for people in northwestern Somaliland." Work under this grant focused on assessing the viability of adapting Namibia's Community Based Natural Resource Management (CBNRM) approach and conservancy model for Somaliland to decrease human-wildlife conflict and improve livelihoods in rural communities impacted by cheetah trafficking. There was an intentional overlap between this project and other concurrent CCF projects, especially LICIT II (above), and activities under these projects have been conducted with an integrated approach.

A principal activity was an initiative for conservation education in schools in several villages and districts in Somaliland's Awdal region, based on CCF's Future Conservationists of Africa (FCA) program. Topics covered by the FCA curriculum include basic conservation principles, sustainable wildlife utilization, and the role and value of predators, as well as considerations of biology, ecology, and sustainable agriculture. Awdal is the site for the pilot conservancy developed under the LICIT II project and is also the location of the EU project target communities (see above). The IUCN project training thus supported the governance work of these projects by enhancing conservation awareness and skills in the region.

CCF initially trained teachers from schools in the target area. CCF and the Ministry then supported the trained teachers in delivering the FCA program to students in their community schools. A total of 1954 elementary and secondary students, of whom approximately 55 percent were male and 45 percent female, participated in the FCA training courses.

Taiwan Grant

This grant provides funds for fielding three Community Wildlife Observers in the area around Geed Deeble, Somaliland, where CCF's Cheetah Center is now located. These observers are in addition to those trained under the EU project (above). The observers conduct weekly field surveys to collect data about wildlife presence and incidents of wildlife crime or human-wildlife conflict in their communities. The observers meet with CCF staff on a regular basis to submit data and report on their patrols. They are also equipped to use the SMART platform to automatically upload data, which allows delivery of patrol observations in real-time for centralization and analysis. The Government of Taiwan has provided $8,000 in additional funds to extend the work of the observers through 2025.

Rainforest Trust Grant

This grant concluded in 2024. It provided funds for conducting surveys in Somaliland including first-ever camera trap surveys in the Geed Deeble area around the proposed national park/protected area and the CCF cheetah center. This was needed to complete the ecological study required to estimate the biodiversity of the area in preparation for physically demarcating its boundaries. Demarcation is an important prerequisite to protecting the area from illegal activities that could harm resident cheetahs and other wildlife. Together with the new Wildlife and Forestry Law (see above) demarcation will also provide a legal and geographic framework to support MoECC in negotiating with communities that currently use the land. Numerous species were observed, including cheetahs and others previously undocumented in the area. During the survey work the CCF team encountered several unexpected pastoral settlements within the proposed boundaries of the protected area, which then had to be included in the community consultation process. CCF and the MoECC jointly conducted an awareness campaign in these communities to sensitize them on the purpose of the camera traps and identify community liaisons to help oversee the cameras. Physical demarcation is the principal remaining activity for this project.

## *International and Regional Policy*

### 1. Global Cheetah Summit

The Global Cheetah Summit convened by CCF in Addis Ababa in January 2024 included a session on IWT that addressed the current status of illegal trade in cheetahs. Participants recognized that IWT is a large and diverse operation that requires a multi-level response including government enforcement, awareness, and direct involvement from experts. Many participants agreed that although IWT is still a major problem, they were hopeful that with progress being made and continued support from governments and other NGOs the trade could be halted. Continued collaboration was seen as the most important factor to success in stopping IWT. In particular it was suggested to focus more on involving transportation and finance authorities in IWT enforcement to allow the tracing of transport routes and money trails.

Discussion also addressed the demand side and the need for an approach that includes constructive measures and is not just focused on shaming and punishment. Positive strategies could include education and social change programs to empower people to become champions for wildlife instead of consumers of it, as well as new laws and guidelines that facilitate these strategies.

The Summit participants signed a Declaration (the Addis Ababa Declaration) and formed several working groups to carry forward the ideas for collaboration expressed at the Summit, including a group focused on IWT. CCF is the Chair of this Working Group. Planning is in progress for a one-year follow up in January 2025.

### 2. Multilateral Environmental Conventions: CITES, IUCN, and CMS

The cheetah has been included in CITES Appendix I since 1975. Cheetahs are listed as globally Vulnerable on the IUCN Red List of Threatened Species™. At the end of 2023, the

IUCN uplisted the cheetah population of the Horn of Africa (*Acinonyx jubatus soemmeringii*) to Endangered status, which was supported by the genetic evidence that *A. j. soemmeringii* was targeted by the illegal wildlife trade. In 2009, the cheetah was listed in Appendix I of the Convention on the Conservation of Migratory Species of Wild Animals (CMS), except for its populations in Zimbabwe. Populations in Botswana and Namibia are also not listed as the two counties are not Parties to CMS. CCF has continued to be active in promoting action on cheetahs in these global fora.

## a. CITES – Convention on Trade in Endangered Species

CITES Parties adopted the Big Cats Task Force (BCTF) Terms of Reference (ToR) at its Conference of the parties in 2022, with intent that the BCTF would serve as a vehicle for CITES work on endangered big cats including cheetahs. The BCTF was further developed at a meeting of BCTF range states in 2023, as part of a joint event with the CMS African Carnivores Initiative (see below). This included a number of recommendations that correlated directly with CCF's priorities for its current set of projects in the Horn of Africa, including: establishing or strengthening multi-agency units responsible for wildlife law enforcement, using data analysis to inform strategies and approaches to wildlife law enforcement, sharing information to harmonize legislation to address wildlife crime, including illegal trade in big cats, and developing bilateral or regional agreements to facilitate transboundary monitoring and intelligence-sharing, collaboration and information exchange to address illegal trade in big cat species.

Because of continued delays in launching the BCTF, CCF has supported proposals to continue CITES work on cheetahs outside the BCTF, but this has not been agreed by CITES parties. Yet, CITES parties affected by illegal trade in cheetahs were mandated to make status reports to the CITES Secretariat in advance of the 78th Standing Committee (SC) meeting in February 2025, which will then develop recommendations for consideration at the next CITES Conference of the Parties (CoP) later in 2025. Ethiopia, Somalia, and Yemen submitted reports, but there was no response from principal destination countries such as Saudi Arabia or the UAE. A proposal to create a new CITES resolution on all big cats was also under discussion but it seems that there would not be support for it, as the CITES Animals Committee, at its 33rd meeting in Geneva in July, recommended against it. The argument against it is that it would potentially override species-specific efforts. The final decision will be made through the 78th SC and the next CoP.

### b. CMS – Convention on Migratory Species

CCF attended the 14th CMS Conference of the parties (CoP 14) held in Samarkand, Uzbekistan in February 2024 as an observer. CCF has three priorities within the CMS: 1) the joint CMS-CITES African Carnivores Initiative (ACI); 2) listing of missing populations through the convention; and 3) work related to Asiatic cheetah populations.

The ACI Program of Work (PoW) was developed in 2021. In 2023, CMS convened a meeting of the ACI Range States to set priorities for implementing the PoW. These priorities are broadly consistent with CCF's strategies and goals for cheetah conservation. The PoW will expire in 2025; at the CoP, the CMS Secretariat noted that due to lack of funding and other

reasons, it will not be possible to fully implement the PoW by then. This indicates the future of the PoW will need to be addressed before the expiration date. The goals of the ACI were carried forward in the work of CMS at the CoP in Uzbekistan, and The CMS and CITES Secretariats are exploring long-term funding mechanisms for the ACI's ongoing operations.

The CMS Intersessional Working Group on the Asiatic Cheetah, established at the 5th Meeting of the Sessional Committee of the CMS Scientific Council, has a mandate to consider options for the recovery of the Asiatic and North-East African Cheetah. The terms of reference of the working group include considering assessments of the genetic status of the Asiatic cheetah, assessing its current population status, and determining whether supplementation from other cheetah populations is needed to secure its genetic viability. The Working Group has not yet held a meeting.

At the CMS CoP, the government of Uzbekistan announced it would reintroduce cheetahs in the country, however to date no further information emerged about this initiative.

**3. Ethiopia**

CCF had to restructure its activities in Ethiopia because BeWildAid (BWA), CCF's principal partner for Ethiopia-based activities under the FWS project described above, abruptly shut down its operations and left the country. Discussions with CCF's government counterpart the Ethiopian Wildlife Conservation Authority (EWCA) led to an understanding that CCF would work together with EWCA to revise and implement FWS project activities in Ethiopia.

CCF has also engaged EWCA in discussions on longer-term collaboration involving the extension of the community conservancy model CCF is piloting in Somaliland to the Somali Regional State of Ethiopia (SRS). Similarities in language, culture, and lifestyle between the SRS and Somaliland indicate that, in principle, the Somaliland model could also work in the SRS, with adjustments for local circumstances and the necessary support from government authorities. Any such initiative would require new funding.

EWCA co-hosted CCF's Global Cheetah Summit in Addis Ababa in January 2024.

CCF hired a country liaison in Ethiopia who will begin work on January 1, 2025. Based in Addis Ababa, this is a part-time position that will be responsible for maintaining contact with EWCA and other Ethiopian counterparts and partners and assisting with organization of meetings and other CCF activities in the country. The new hire is a former staff officer at EWCA who has also worked for USAID, and other large donor organizations. As noted above, CCF is also in the process of hiring a coordinator to support project activities in the Somali Regional State, principally under the USFWS project.

**4. IGAD**

The Intergovernmental Authority on Development (IGAD) is the regional cooperation organization for the countries in the Horn of Africa and provides a natural platform for cross-border collaboration against cheetah trafficking among countries that are primary sources of illegally traded live cheetahs. CCF supported the establishment of the Horn of Africa Wildlife Enforcement Network (HAWEN) under IGAD in 2017 as a vehicle for

wildlife enforcement cooperation. CCF's suite of projects includes further actions in support of IGAD and the HAWEN, in particular technical legal assistance under the LICIT II and recently completed CMS projects (above), led by partner Legal Atlas, to strengthen and formalize the legal framework for cooperation among the IGAD member states and IGAD itself. CCF's efforts are complementary to actions by other donors and partners that have an interest in strengthening the HAWEN. As noted above, CCF's work with IGAD encountered significant delays early in 2024 due to changes in IGAD leadership and the organization's chronic lack of capacity, in particular a continuing inability to support the HAWEN Secretariat. The lack of a functioning HAWEN Secretariat was an obstacle for the LICIT II and CMS projects, since the Secretariat is supposed to serve as IGAD's point of coordination with partners such as CCF. IGAD, its member states, and other NGO partners including CCF addressed these issues at a meeting organized by CMS in Addis Ababa in June. The outcome was a proposal from IGAD to reposition the HAWEN within IGAD's bureaucratic structure to allow it to receive more direct support from IGAD. IGAD has also drawn funds from a large EU-funded project to appoint a staff officer to the HAWEN Secretariat. These moves should improve the functioning of the HAWEN, facilitate its access to IGAD resources, and strengthen its ability to collaborate with partners such as CCF. If implemented effectively, these changes should allow CCF to continue working with IGAD and other partners to build on the outcome of the CMS and LICIT II projects and consider other initiatives.

**5. Puntland**

The range of the Horn of Africa cheetah population extends into Puntland. Because access to Puntland has been limited, there is insufficient data on the status and distribution of cheetahs and the extent of threats such as trafficking and loss of habitat. To establish a stronger baseline, CCF has proposed, and the Puntland authorities have agreed, to conduct survey activities in Puntland as part of the USFWS-funded project discussed above. Since the FWS project activities are not scheduled to take place until 2026-7, CCF is looking for opportunities to remain engaged with Puntland authorities in the interim. As noted above, Puntland authorities transferred a cheetah cub to CCF in Somaliland following a confiscation incident in February.

**6. Somalia**

CCF continued to look for opportunities to build a relationship with Somali wildlife authorities, in particular the new Ministry of Environment and Climate Change (not to be confused with the Somaliland ministry of the same name), despite Somalia's challenges of persistent conflict and insecurity and lack of capacity on the part of both government and civil society. Maintaining a cooperative relationship with Somalia is important, since the range of the Horn of Africa cheetah population likely extends there, traffickers are active in Somalia, and Somalia's support will be needed for project work in Puntland. Despite the obstacles, Somalia participated in the January 2024 Cheetah Summit.

CCF has no funds specifically earmarked for Somalia, but IWT staff look for opportunities to engage within the framework of CCF's current projects and activities in the region. CCF is currently working with the Somali MoECC to develop project proposals to provide survey and

awareness training and materials, and to support revision and strengthening of Somalia's wildlife laws. These activities would build on previous project work and would not involve travel to Somalia. The target donor for these proposals is the UN Mission to Somalia, which has indicated interest in working with CCF.

## F.3 Somaliland Resident Cheetah Facts and Data

### Overview

The team at the Cheetah Conservation Fund Somaliland actively manages a growing resident population of juvenile, sub-adult, and adult cheetahs (plus one leopard, one caracal, one lanner falcon, and six domestic dogs). These carnivores depend on and require intensive daily management and treatment, including: nutrition; hygiene; biosecurity; and clinical assessments. Overall, health assessments can be performed visually at a distance, or while interacting with the resident carnivores during their daily feeding or training sessions. Evaluations are conducted daily on each and every animal, especially on individuals undergoing treatment.

As always, CCF staff always put the animals' health, welfare, and safety as the top priority. Since the transfer of the population from the safe houses in Hargeisa city, to the new cheetah holding facilities at the Cheetah Rescue and Conservation Centre (CRCC) in Geed Deeble, there has been an overall improvement in the health and welfare of the animals under CCF's care, with the new enclosures and on-site wildlife presenting natural enrichment and hunting opportunities for the resident population.

Prey known to have been hunted and consumed to date (since July 2023) include: Baboons, Dik-dik, Birds, Striped polecat, Bush hares. The act of hunting is not always witnessed, so it is possible there are more incidents of successful hunts by the cheetahs. Their natural instincts are strong and very impressive for captive cheetahs raised in Hargeisa with limited space and opportunities.

### Internal animal transfers at CRCC (Jan to Dec 2024)

*Table 48: Internal animals transfers at CRCC (Jan to Dec 2024)*

| Date of transfer | Details |
|---|---|
| **Jan 31, 2024** | Frigga 1.0 transferred from Cub Room 8 back to E13 after completion of post-surgery hospitalisation period |
| **Feb 23, 2024** | Bandit Group (6.1*) commenced introductions and completion of transfer to Yard 2 and the adjoining Cub Rooms (4, 6 and 8)<br>*[*6.1 at the time of introductions, as of 30-Jun-2024 is now 5.0 due to deaths of 2 members)* |
| **Mar 31, 2024** | Mist and Cloud were transferred from E1.5 (temporary) to the newly constructed EM&C (permanent enclosure) |
| **Apr 01, 2024** | Hanuman was transferred from E9A (management pen of E9 – temporary enclosure) to E1.5 (temporary enclosure). E4 (Hanuman's permanent enclosure) is currently occupied by Jasiri Group 5.4, pending the completion of 2 new enclosures (1 for females 0.4, 1 for males 5.0) |
| **Jun 13, 2024** | Madar 1.0 was transferred from Cub Room 7 to Cub Room 1 after the completion of quarantine, to provide the opportunity to commence introductions with the other new cub arrival of 2024 to date, Rama 1.0 (occupant of Cub Room 3) |
| **Aug 3, 2024** | Zelda 0.1 transferred to the Clinic for gastrotomy, then to Cub room 8 for further treatment. |

| | |
|---|---|
| **Aug 17, 2024** | Jasiri Group (0.4) were transferred from E4 (temporary and sharing with Cheeto Group (5.0) to the newly constructed EJa (permanent enclosure) |
| **Aug 19, 2024** | Zelda 0.1 transferred from Cub Room 8 back to E1 after completion of post- surgery hospitalisation period |
| **Sept 11, 2024** | Falco, most likely a male due to size, taken into care and into Cub room 7 post rescue from MoECC. |
| **Oct 15, 2024** | Falco transferred to a new enclosure, Yard 4 Bird enclosure once it was built and made ready as he is unable to be released. |
| **Dec 20, 2024** | Leo 1.0 transferred to the Clinic for workup and treatment, then to Cub room 8. |
| **Dec 23, 2024** | Leo 1.0 transferred from Cub Room 8 back to E3 after completion of post sedation hospitalisation period. |
| **Dec 24, 2024** | Venus, 0.1 transferred the Clinic for surgical debridement of wound to left foot, then to Cub room 4 for further treatment. |

Overall distribution of animals and enclosures at CRCC Geed Deeble as of Jun 30, 2024

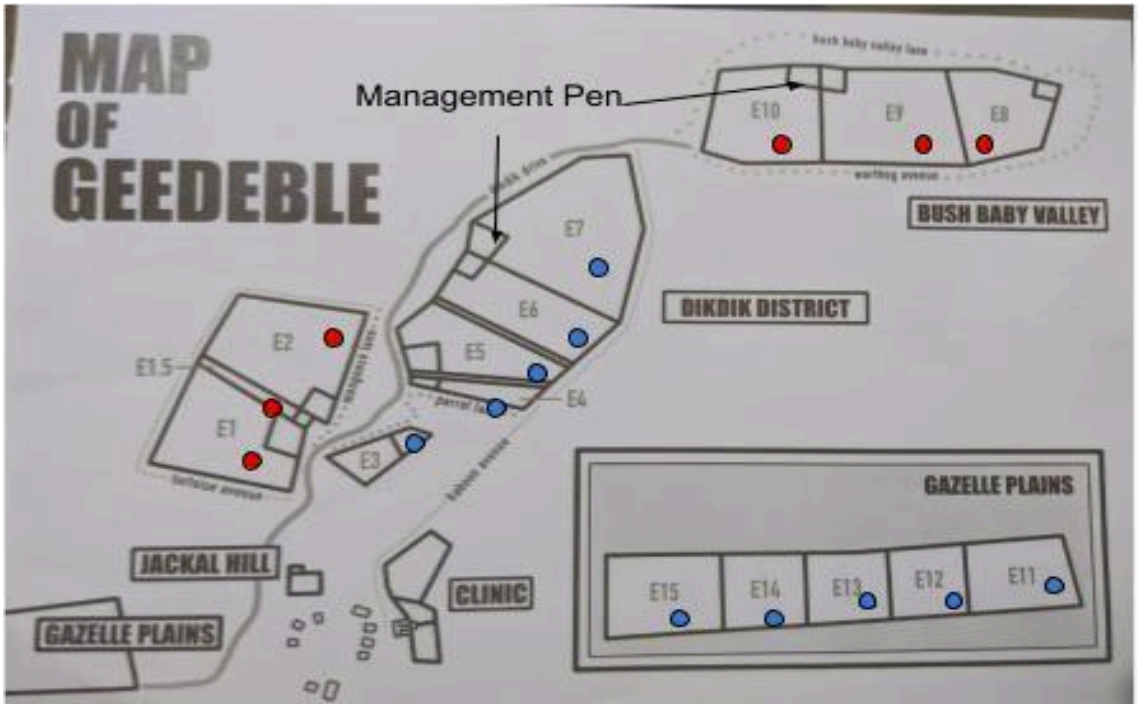


*Figure 77: Animals and enclosures at CRCC*

| *KEY* | | |
|---|---|---|
| *Management Pen:* | *Red dot:* | *Blue dot:* |
| Small enclosure within the large enclosure | Female enclosures | Male enclosures |

**As of 31- Dec-2024, the CRCC facility currently comprises of the following housing facilities for the animals under our care:**

- 17 sub-adult/adult cheetah enclosures located in 3 different areas:
  - Gazelle Plains

    - Dik-dik District
    - Bush Baby Valley

- 3 cub yards located at the clinic

- 8 cub rooms located at the clinic

- 1 caracal enclosure located at Jackal Hill
- 1 falcon enclosure located behind the clinic

- 3 enclosures under construction

## Distribution by sector

| CLINIC AND CUB ENCLOSURES | | |
|---|---|---|
| **Cub room 1** | **Madar (1.0) ITAJU2136** | **Temporary** |
| **Cub room 2** | **No animals** | |
| **Cub room 3** | **Rama (1.0) ITAJU2138** | **Temporary** |
| **Cub room 4** | **Venus (0.1) ITAJU2037** | **Temporary** |
| **Cub room 5** | **No animals** | |
| **Cub room 6** | **No animals** | |
| **Cub room 7** | **No animals** | |
| **Cub room 8** | **No animals** | |
| Yard 1 | R&M Group: 2.0 Rama (ITAJU2136) Madar (ITAJU2138) | **Temporary** |
| Yard 2 | No animals | |
| Yard 3 | Bandits 5.0 – Sunny-Joe (ITAJU 2131), Turo (ITAJU 2132), Riks (ITAJU 2133), Mercury (ITAJU 2134), Buzz (ITAJU 2135) | **Temporary** |
| Yard 4 (bird aviary) | Falco | |

| GAZELLE PLAINS | | |
|---|---|---|
| Enclosure 11 | Bagheer Group (5.0) | Permanent |

| | | |
|---|---|---|
| Enclosure 12 | Serge and Major (2.0) | Permanent |
| Enclosure 13 | JMF Group (3.0) | Permanent |
| Enclosure 14 | DJ Group (4.0) | Permanent |
| Enclosure 15 | Gamma Group (6.0) | Permanent |

| DIKDIK DISTRICT |
|---|

| | | |
|---|---|---|
| Enclosure 1 | Teresa Group (0.7) | Permanent |
| Enclosure 1.5 | Hanuman (1.0) | Temporary |
| Enclosure 2 | Pacha Group (0.6) | Permanent |
| Enclosure 3 | Storm Group (3.0) | Permanent |
| Enclosure 4 | Cheeto Group (0.4) | Temporary |
| Enclosure 5 | Idris Group (6.0) | Permanent |
| Enclosure 6 | Jabari Group (5.0) | Permanent |
| Enclosure 7 | Azaar Group (8.0) | Permanent |

| BUSH BABY VALLEY |
|---|

| | | |
|---|---|---|
| Enclosure Ja | Jasiri Group (0.4) | Permanent |
| Enclosure M&C | Mist and Cloud (0.2) | Permanent |
| Enclosure 8 | Kurro Group (0.5) | Permanent |
| Enclosure 9 | Calla Group (0.11) | Permanent |
| Enclosure 10 | Kariir Group (0.6) | Permanent |

| JACKAL HILL |
|---|

| | | |
|---|---|---|
| Leopard E | Honey (0.1) | Permanent |

| |
|---|
| STAFF LIVING QUARTERS |

| | | |
|---|---|---|
| Compound | 3.3 Dogs | Permanent |

## Resident population

As of 31 December 2024, CCF Somaliland is home to a population of 96 cheetahs (55M, 41F), 1 caracal (F), 1 Lanner falcon (M), and 6 dogs adopted from the city (3M, 3F).

# Wildlife at CRCC

In addition to all our resident population of cheetahs, the Centre offers a sheltered environment for wildlife, away from local herders and livestock surrounding the facility.

Resident families of animals include warthogs, dik-diks, spotted hyenas, and baboons. A comprehensive list of wildlife observed at the Geed Deeble location in 2024 to date is found below:

*Wildlife observed at the CRCC site in 2024 to date*

- ➔ Spotted hyena
- ➔ Golden wolf
- ➔ White tail mongoose
- ➔ Striped polecat
- ➔ African porcupine
- ➔ Bush baby
- ➔ Leopard tortoise
- ➔ Bell's hinged back tortoise
- ➔ Spur tortoise
- ➔ Bush hare
- ➔ Dik-dik
- ➔ African wild cat
- ➔ Hamadryas baboon
- ➔ Warthog
- ➔ Red Spitting Cobra, Puff Adder, Boomslang
- ➔ Caracal (camera trap footage only)
- ➔ Bat eared fox (camera trap footage only)
- ➔ Many species of insects
- ➔ Many species of reptiles
- ➔ Many bird species

## New arrivals (cub intakes)

Between 01-Jan-2024 and 31- Dec-2024, CCF Somaliland staff, in collaboration with the Somaliland Ministry of Environment and Climate Change (MoECC), were involved in two cub confiscations (See Appendix, Table 2).

Summary of facts from these confiscations below:

- Intake of 2 new cubs (2 M)
- Age of each cub at the time of confiscation was estimated to be 8 weeks of age (March intake) and 20 weeks of age (May intake)
- Intake numbers: 1 individual per intake

After confiscation and arrival to the CRCC, cubs undergo triage, clinical assessment, and stabilisation of medical conditions, with initial intake blood work performed to obtain a baseline. Further intake procedures (including sample collection and measurements) are typically performed approximately 48-72 hours after arrival, to allow the cub(s) time to stabilise and adjust to their new environment and diet regime.

The most common changes (some or all per individual) observed on intake bloodwork in 2024 include:

| | |
|---|---|
| Haematology | Increased total WBCs |
| | Increased NEU |
| | Increased LYM |
| | Increased HCT |
| Serum biochemistry | Low Ca:P ratio (nutritional or metabolic disorders) |
| | Decreased creatinine (commonly seen in young/growing animals, but could also indicate muscle atrophy due to malnutrition) |
| | Increased ALP (commonly seen in young/growing animals, attributed to increased osteoblastic activity in bone) |
| | Increased AMYL (typical finding in the CRCC cheetah population, regardless of age) |

The most common health issues encountered at confiscation in 2024 were:

- Mild dehydration (5% - 7%)
- Mild to moderate malnutrition - presented clinically as underweight, poor body condition (typically BCS 2 or 3 / 9), and varying degrees of muscle atrophy/muscle wastage
- Abdominal distension or bloating due to inappropriate diet prior to arrival at CRCC
- Poor skin/hair condition (alopecia, thin and/or matted fur coat)
- Wounds/lacerations

The majority of the health issues and clinical symptoms were corrected within the first 3-7 days of arrival by intensive management and support. Fluid replacement was administered as necessary to correct dehydration (by subcutaneous or intravenous routes, depending on the severity). Depending on clinical status and bloodwork, a 7 to 10- day course of antibiotics was administered prophylactically (due to weakened immune status). In certain cases, a one-off dose of glucocorticoid (Dexamethasone at a dose rate of 0.1mg/kg) was administered on intake to replace reduced endogenous glucocorticoid – the reduction is believed to be due to adrenal insufficiency (as a result of severe metabolic stress). Parasiticides (oral and topical) were typically administered 3 days after arrival, and wound care (cleaning and application of topical antiseptics) administering antiseptic ointment) was performed as required. If coccidia

oocysts were identified on faecal flotation, either a 5 day injectable course of trimethoprim-sulfonamide (coccidiostat) or a single oral dose of toltrazuril (coccidiocidal) were administered.

Malnutrition and nutritional disorders are corrected over a longer period (weeks to months), with appropriate mineral and vitamin supplementation, provision of nutritionally complete milk, probiotics, and an appropriate diet for life stage and bodyweight (primary protein source being goat meat and, in some cases, chicken).

Gastroenteritis is commonly encountered after intake. Changes in appetite, intermittent diarrhoea, regurgitation or vomiting, and undigested meat have been associated with adjustment to a new/more appropriate diet, stress, and infections (bacterial, parasitic). Intensive treatment and support are commenced as soon as possible, and include deworming (based on faecal analysis, and if not already administered at intake), gradual food transitions, subcutaneous or intravenous fluids, antiemetics, gastrointestinal protectants, and probiotics. After diagnostic workups (faecal analysis and bloodwork), appropriate antibiotics are included in the treatment plan, if appropriate.

## Overview: Husbandry, animal management and clinical

Visual observations and checks from a distance are routinely performed daily by the keeper team and with the involvement of the veterinary team. Many of the resident population are approachable and will allow varying degrees of human contact, depending on temperament.

In combination with regular behavioural training, this allows the veterinary team to perform basic close-up visual evaluations, hands-on clinical examinations, collect blood, and administer vaccines and treatments without requiring sedation/anaesthesia. When the animal allows, hands-on physical examinations were performed on animals that were reported to have any clinical, physical or behavioural abnormalities. These examinations were also carried out in sick individuals, when close monitoring was required to adjust treatment plans or to perform further diagnostic tests, including imaging.

Animals that do not allow safe close physical contact were examined using protected contact methods. Depending on temperament, this would include using a fence as a barrier or having the animal in a training crate or in a squeeze cage. The keeper and veterinary teams continue to work diligently to accustom and train individuals to undergo conditioning for medical purposes, such as physical examinations, voluntary blood collection, radiographs and voluntarily entering the squeeze cage.

All cheetahs are trained for basic medical procedures including blood sampling, injections, and in some cases, radiographs. Cubs are regularly familiarised with being touched on the neck, shoulder area, pelvic area, and base of tail while feeding in preparation for injections or medications that will need to be administered in the future after translocating to enclosures in the bush.

## Daily husbandry

Daily tasks are very important for the safety of the cheetahs and for the staff. At the CRCC, all fence lines and electric wires are checked daily and fixed if needed. In the rainy season, a lot of work goes to manage the damage caused by the water by adding gabion, rocks and sand. A daily tortoise check, especially in the rainy season, is important to prevent mortality due to contact with the electric fences. Other essential tasks include cleaning and refilling the water bowls, plus cleaning feeding areas (plywood, racking branches and thorns, etc.). Bush clearing is always required to remove plant debris (ideal habitats for snakes) and vines (choking hazard).

The meat room is maintained in high standard of hygiene, with daily cleaning performed to maintain adequate standards of hygiene. This includes regular checks and cleaning of the refrigerators and freezers.

## Enrichment / mental and physical stimulation

The cheetahs run after the trucks daily during the morning headcounts, which gives very little mental stimulation but provides good exercising opportunities. A new lure system arrived in November 2024 and has been used with a small number of groups of cheetahs. The lure is set up within an enclosure, and typically the cheetahs participate with a lot of enthusiasm. It is a great tool to exercise and also mentally challenge the cheetahs, by changing the course every run to give them more challenges.

Carcass feeding provides good stimulation and a good bonding session for the groups, aiding improvement of mastication apparatus, body musculature and oral health.

The environment has to date provided the best enrichment for the resident population, as the trees, foliage, and wildlife are providing multiple non-pattern opportunities for mental and physical stimulation.

## Preventive health and management procedures - summary

The following procedures have been performed during the period Jan to Dec 2024:

- Bodyweight
    - Currently scheduled to check every 6 months due to one scale being shared between the bush cats and the clinic. Last obtained in September 2024. There were some exceptions to this. Betty White's weight was obtained in November 2024. Zelda is currently weighed fortnightly. Azaar's group were additionally weighed in December 2024 due to group weight loss noted in September 2024. Cheetahs are also weighed when they are sedated.
- Body Condition Score (BCS) Assessment
    - Monthly – performed at same time as monthly ectoparasite prevention
- Parasite control

    - Monthly ectoparasite prevention – topical Frontline Plus
    - Oral endoparasite control every 3-6 months (depending on the outcome of the pooled faecal analysis for each enclosure); the active substance is alternated with each use to reduce the risk of resistance to one particular substance
- Vaccinations
    - Primary courses of FVCRP, Rabies and CDV for all new arrivals
    - Annual booster vaccinations of FVCRP, Rabies, and CDV for all resident animals
- Bloodwork
    - Intake bloodwork and disease testing (FIV/FeLV) for all new arrivals
    - Annual blood work – Feb / March / April / May
- Faecal collection (every 3 months)
    - 2024 schedule for collection: Feb / May / Aug / Nov
    - Pooled samples per enclosure are now collected monthly (as of December 2024) - for in-house faecal analysis by flotation and McMasters if positive to quantify
    - Individual samples for storage in Namibia and for external FCoV-PCR testing

## Diet and nutrition

At the time of writing, approximately 70-100 goats are purchased and processed each week, to feed the animals residing at the CRCC. For the adults, group carcass feeding occurs every 2 days, with supplements added at each feeding to help maintain optimal health and immune status.

Predator powder (V-TECH, ZA) and Carnivit powder (MWA Animal Health, UK) are calculated with consideration to individual and group (enclosure) body weights, then added to the diets. Currently, the adults alternate between the two supplements every feeding (i.e. Predator at feed 1, Carnivit at feed 2, Predator at feed 3 etc).

Cubs and growing animals (sub-adults) up to 18 months of age have a higher calcium requirement compared to adult cheetahs and other large carnivore species. Although Carnivit contains taurine (unlike Predator powder), the only supplement that satisfies the specific calcium requirement in growing cubs is Predator powder. In late May 2024, a management decision was made to supplement the 7 cubs under 12 months of age with calcium carbonate to increase their dietary calcium intake.

The type of diet provided to all cheetahs is goat (in the form of goat carcasses, meat, and carcass pieces depending on individual requirements). After butchery, carcasses, chunk meat,

and organs are frozen for 3 days before undergoing a thawing process over 24h; the intent is to kill any harmful bacteria or parasites before feeding to the resident population.

Cheetah cubs receive multiple feeds a day (number of feeds varies depending on age, life stage, health status). A tailored diet is established by the vet team (taking into consideration medical condition, body condition, and weight) – as the cubs grow, their diet is adapted according to their nutritional requirements and life stage.

The diet schedule for sub-adult and adult cheetahs is 1 feeding day every 2 days (equal to approx. 15 feeding days per month). Some individuals will require supplemental feeding or a special diet for medical reasons or low body condition scores.

Honey (caracal) receives a chicken-based diet daily. She has shown some occasional signs of hunting lizards since moving to her new enclosure.

Diets are managed by the head keepers and are based on body condition, nutritional needs and individual requirements. Monthly BCS assessments are performed in collaboration with the veterinary and keeper teams; this allows for any changes to be noted and diet adjustments to be made as appropriate. Supplement reviews are performed by the veterinarians periodically to ensure each individual receives appropriate supplementation.

## Behavioural issues

Since moving to Geed Deeble in July 2023 and to prevent unwanted stereotypical behaviour and hormone-induced stress, females are housed in a different sector from the males. Taking away the visual stimulation and smell of females decreases typical mating behaviour, confrontations between group mates, frustration and overalls results in decreased stress.

However, due to the limited number of enclosures available, with construction of new enclosures ongoing, certain management changes have resulted in mixed genders within certain sectors. As such, behavioural issues have been noted as follows:

### *Aggression and anxiety (cheetah to cheetah)*

This was primarily observed between:

- Hanuman 1.0 (ITAJU 2011) and:
    - Kariir Group 0.6 and Calla Group 0.11 – when residing in E9A
    - E1 Teresa Group (0.7), E2 Pacha Group (0.6) - after transfer to E1.5
    - This is primarily a result of Hanuman being translocated multiple times to temporary enclosures which are located between female only enclosures, causing stress and aggression through fence line encounters
- M/C 0.2 between each other and Kurro Group 0.5
    - This generally takes place on feed mornings or when using their shared shift
- E11 Bagheer group 5.0 and E12 Serge and Major 2.0

    - This generally takes place when keepers are present for training sessions, head counts or running them with a vehicle

- E14 DJ group 4.0 and E15 Gamma Group 6.0
    - This generally takes place when keepers are present for training sessions, head counts or running them with a vehicle
    - It also occurs when using their joined shift. Green screening has been added and this has minimised some of the hostility when using shifts.

### *Anxiety and stress-induced illness*

Since 2023, Milo 1.0 (SOPPA 0093) has experienced multiple episodes of ill health. A pattern had emerged, with the onset of episodes attributable to stress events (e.g. nearby constructions, visitors to the enclosure). Behavioural changes manifested as hiding, growling, biting his back legs and compulsively licking himself to relieve his anxiety. Milo would also pace rapidly when he was overly excited, usually at the time of feeding or blood draws.

### *Aggression (cheetah to human)*

Keepers remained extra vigilant and cautious when working in enclosure and management pen with AMIIN (ITAJU 2027), AMIIR (ITAJU 2028), IDRIS (ITAJU 2008), MARS (ITAJU 2034) and PLUTO (2035) (5 members of Idris Group 6.0) A new medical shift area and management pen have been constructed in 2024, enhancing safety for the animal care and veterinary staff.

SALIM (ITAJU 2075) has displayed food-aggressive behaviour on multiple occasions, after being separated in early 2024 for individual feeding, due to ongoing issues at the time with undigested meat in faecals.

STORM (ITAJU 1935) has previously displayed aggressive behaviour. Keepers are able to work with him and give him space. He tolerates basic vet work using a specifically created crate

KARIIR (ITAJU 2005) displays hostile behaviour when receiving daily medication. Vets are able to perform basic tasks with her but cautiously

AZAAR (ITAJU 2041) displays obsessive chasing behaviour when vehicles drive past the fenceline of the enclosure, and on multiple occasions has shown a predisposed aggression towards males of a certain height and complexion.

FADUMA (ITAJU 1958) displays obsessive chasing behaviour when vehicles drive past the fenceline of the enclosure.

### *Nervous Behaviour*

The cheetahs listed below display nervous behaviour when interacting with keepers and/or vets. Training sessions take place to aid their comfort level and considerations are constantly

made as to which keeper/vet is interacting directly with them during these sessions and vet work

- FADUMA (ITAJU 1958)
- LIBBO (ITAJU 1926)
- ASTUR (ITAJU 2007)
- FRIGGA (ITAJU 1998)
- SANU (ITAJU 2074)
- ABDI (ITAJU 2125)
- BETTY WHITE (ITAJU 2087)
- DAHAB (ITAJU 2086)
- HAKIM (ITAJU 2113)
- LORENZO (ITAJU 2083)
- TERESA (ITAJU 2015)
- All of Calla Group. HANI(ITAJU 2084) and DELTA (ITAJU 2110) are approachable

### Data recording:

Since May 2022, Species360 ZIMS has been the primary software used by the animal care and veterinary teams, to record all keeper notes and medical records pertaining to each individual. Such records include: clinical notes, diagnostic procedures and outcomes, treatments and medical interventions have been and continue to be available on Species360 ZIMS cloud-based software for each individual at CCF Somaliland.

Efforts have been made to successfully upload and transcribe pre-ZIMS records into this digital database (including but not limited to confiscation details, intake examinations, anaesthetic procedures, and bloodwork). One exception is Cub B (2022 intake), as his physical record was kept in the possession of the Somaliland courts system. Google Drive and a suite of apps are used to ensure data and documents are shared and worked on collaboratively, including (but not limited to) protocols, diet calculations, and case reports.

## Medical conditions and cases in resident population

### Preface

Medical conditions encountered in the resident population are summarised in this section, divided into organ systems (e.g. gastrointestinal, musculoskeletal etc). Individual cases of interest are mentioned. Summaries of procedures performed either conscious or under sedation/anaesthesia can be found later in this section.

### Chronic (long-term) cases

Ongoing cases that are being monitored and managed long-term include animals with an absent right femoral head (numerous animals - see section *Absent right femoral head* under Orthopaedic cases), neuromotor impairment (Kariir ITAJU 2005), dermatological lesions due to chronic herpesvirus (Yaku ITAJU 2042), and animals with instances of suspected seizure activity (Kaise ITAJU 2076).

## Musculoskeletal cases

Conditions affecting the musculoskeletal system are noted within the resident population of cheetahs. There are a number of ongoing (chronic) cases that are under constant monitoring and review, primarily in cats with a known history of an absent right femoral head or historical fracture - conditions suspected due to metabolic bone disease, nutritional imbalances, and/or a genetic component. Since moving to the new facility at CRCC Geed-Deeble, incidence of lameness caused by foreign body intrusion (usually in the limbs and paws) has increased, due to the change in environment where plants suited to an arid environment predominate. Known cases of musculoskeletal symptoms are detailed further below.

### Absent right femoral head:

DARTH (ITAJU 1984), YAKU (ITAJU 2042), PACHA (ITAJU 2044), DELPHINA (ITAJU 2047) and JASIRI (ITAJU 2121) have all been diagnosed with an absent right femoral head (in Darth's case, due to atrophy). This presents clinically as intermittent lameness or gait abnormality. The cause is suspected to be due to metabolic bone disease, nutritional imbalances and/or due to a genetic component. Radiographs indicate varying degrees of luxation and deviation of the right femur. Management includes daily joint supplements (Mobiflex or Cosequin), and short courses of anti-inflammatories if any pain, discomfort or inflammation is suspected. Follow up radiographs have been and will continue to be taken if lameness or severe pain is presented.

### Historical fractures (occurred pre-2023):

AMATERASU (ITAJU 2043), DUMA (ITAJU 1939), MOONLIGHT (ITAJU 1839), CLOUD (ITAJU 1836), JANET (ITAJU 1950), and SIF (ITAJU 2001) are all individuals that experienced fractures earlier in life, which have since healed and do not affect their current mobility or quality of life. Suspected possible causes include trauma, metabolic bone disease, and early-life stage nutritional deficiencies/imbalances. Current management practices include provision of joint supplements and/or calcium supplementation when necessary.

### Lameness:

KAISE (ITAJU 2076) displayed sudden onset of progressively abnormal hindlimb mobility in December 2023, manifesting primarily as right hindlimb lameness (although the lameness did shift briefly to the right forelimb), and an abnormally short-stepped hindlimb gait. No pain was elicited on examination of affected limb and spinal region, and there was zero response to pain relief trials using NSAID (meloxicam) and gabapentin. Radiographs were performed under sedation, and after discussion with external veterinary professionals, both a pelvic fracture and sacroiliac luxation were ruled out. To date there is no known cause, however Kaise's mobility improved with restricted and supervised exercise, and daily pain relief in the form of gabapentin. In April 2024, Kaise rejoined the rest of the group and regained access to the full enclosure. As of 31-Dec-2024, no further mobility issues have been observed.

BADIA (ITAJU 2094) was observed with right forelimb lameness during the monthly BCS assessment in April 2024. The lameness successfully resolved after a 5-day course of meloxicam PO.

MISS BEHAVE (ITAJU 2129) displayed left hindlimb lameness and swollen tissue over the left pelvic region on 21-Apr-2024. Both the lameness and swelling resolved after a single meloxicam injection.

ZELDA (ITAJU 2033) observed lameness of the right forelimb and stiff gait in August 2024; started treatment with meloxicam PO as suspected pain due to trauma. Nil improvement shown. Later on, the case was re-classified as neurological FIP.

L.H (ITAJU 2048) was observed with left wrist inflammation and lameness in September 2024. The lameness was successfully resolved after a 3-day course of meloxicam PO.

VENUS (ITAJU 2037) On the 10th of December she presented with non-weight bearing lameness in the left front limb. No inflammation was noted. Given treatment with meloxicam PO with no improvement. Inflammation presented a couple days after and spread all the way to her leg. After 4 days, found an abscess most likely caused by a scorpion or snake bite in the digital pad of the third phalanx in the third digit, affecting also the second digit. Transferred on the 24th of December to the clinic for wound debriding. Receiving wound care daily. Still at the clinic by 31-Dec-24.

### Lameness (self-resolved):

Forelimb and hindlimb lameness self-resolved in many cases with no treatment required and no known cause.

| NAME | ITAJU | DATE |
|---|---|---|
| Hatari | 2116 | 01-Feb-24 |
| Newton | 2119 | 04-Mar-24 |
| Serge | 1997 | 05-Apr-24 |
| Moonlight | 1839 | 15-Aug-24 |
| Delphina | 2047 | 09-Dec-24 |

## Neurological cases

### Neuromotor:

KARIIR (ITAJU 2005) continues to show neuromotor abnormalities, manifesting primarily as bilateral hypermetric forelimb gait. Hypervitaminosis A has been proposed as a possible cause, with changes made to dietary supplementation since to eliminate Vitamin A from her diet, although an infectious cause from the point of onset in December 2021 cannot be ruled out.

The severity of the hypermetric gait has remained stable throughout 2024 to date, with no obvious adverse effects to her quality of life; though occasional fluctuations were experienced in 2023. Kariir's long-term management regimen includes the administration of Gabapentin BID which appears to have aided her condition by providing neuropathic pain relief. Kariir is also receiving a calcium supplementation due to decreasing calcium levels (non-ionised) in serum biochemistry; an improvement in serum calcium was noted after starting supplementation.

## Ataxia without seizure activity

BAGHEER (ITAJU 1981) developed suspected concussion after reacting fearfully to a new staff member while in an enclosed space (shift area). He ran into the shift headfirst, subsequently developed right sided head tilt and ataxia. Supportive treatment was administered and recovery took 1 week, however he was slower compared to before the event.

SUNNY-JOE (ITAJU 2131) and TURO (ITAJU 2132) developed acute onset pelvic limb ataxia with swaying gait in late June 2024. Bloodwork in both cases showed no abnormalities. A Kyroligo (combination multivitamin and multimineral injection) was administered IM to each animal, with improvement to gait and demeanour observed within 48h of injection. Repeat injections led to further improvement. As of 31-Dec-2024, the ataxia is no longer noticeable and treatment with continued Kyroligo injections are ongoing. A mineral or vitamin deficiency is suspected, with consideration to the significant improvement since commencing injections.

RAMA (ITAJU 2136) began showing neurological signs, including unbalanced walking, ataxia and poor coordination in July 2024. Bloodwork showed no abnormalities. His demeanor was playful but became over excited at times. Upon examination, his pupils were dilated and did not respond correctly to changes in light, and his stomach was soft without distension. He ate well but further examination was not possible due to his overexcitement.

These signs align with those previously seen in Bandit's group (Miss Behave, Aamiina, Turo, and Sunny-Joe). First-line treatment involved a Kyroligo IM injection (copper + vitamins) with improvement shown after 48 hours. As of 31-Dec-2024, the ataxia is no longer noticeable and treatment with continued Kyroligo injections are ongoing. A mineral or vitamin deficiency is suspected, with consideration to the significant improvement since commencing injections.

BUZZ (ITAJU 213) and MERCURY (ITAJU 2134) developed acute onset pelvic limb ataxia with swaying gait in late July and early August 2024. Bloodwork in both cases showed no abnormalities. A Kyroligo (combination multivitamin and multimineral injection) was administered IM to each animal, with improvement to gait and demeanour observed within 48h of injection. Repeated injections led to further improvement. As of 31-Dec-2024, the ataxia is no longer noticeable and treatment with continued Kyroligo injections are ongoing. A mineral or vitamin deficiency is suspected, with consideration to the significant improvement since commencing injections.

Given that all members of the Bandit group, except RIKS (ITAJU 2133), exhibited ataxia, he was administered a preventative treatment with Kyroligo IM for one month (one injection every week for four weeks). As of December 31, 2024, the patient has not shown any neurological signs, unlike the rest of his group, indicating that the preventative treatment has been successful.

LEO (ITAJU 1928) on the 15th of September he was noted to have some signs of ataxia and ambulatory paraparesis (crossing back legs to walk). At that point, he had been on FIP watch and with IBD treatment. Suspected neurological FIP as per bloods results and clinical history. Ataxia and ambulatory paraparesis resolved after 5 days of GS-44 treatment SQ.

## Ataxia with seizure activity

On 06-Apr-2024, AAMIINA (ITAJU 2128) presented with left sided head tilt and ataxia. A vestibular episode was suspected and return to normal health status was achieved within 48h of a steroid injection given for supportive care. However, on 19-Apr, a seizure episode lasting 3-5 mins was observed by keeper staff and the vet was immediately called out to assess. After the seizure episode had finished, Aamiina subsequently developed severe right side head tilt, bilateral left to right nystagmus, and favoured the right side. No anisocoria or proprioceptive deficits. Cluster or partial seizures could not be ruled out as was seen vomiting and imbalanced before the onset of the seizure.

Anti-seizure medication (levetiracetam) was commenced at a cluster seizure dose, with supportive care (fluids and maropitant) also administered. Clindamycin was later commenced due to suspicion of Toxoplasma and results received from a local human laboratory. However, a partial seizure was observed 2 days later, and despite a brief improvement in behaviour and appetite during the following week, Aamiina progressively deteriorated from 27-Apr, culminating on 29-Apr in a large seizure and subsequent multiple cardiorespiratory arrests. Despite the best efforts of the team on the ground and multiple resuscitations, Aamiina sadly passed away without regaining consciousness. Necropsy revealed no significant findings; however, samples have been sent to an external laboratory.

MISS BEHAVE (ITAJU 2129) displayed onset of abnormal pelvic gait on 25-Apr-2024. On 03-May she experienced diarrhoea, and received maropitant and SC fluids for support. After her pelvic mobility worsened on 11-May, multiple medications were trialled to assess for effect, due to the urgent nature of her worsening condition and the loss of her sibling 3 weeks prior. A new medication was introduced every 12-24 hours if the previous medication had no effect either visibly or on bloodwork. In chronological order, the following medications were trialled: Clindamycin, vitamin B PO, Fluconazole, Amox/clav, Metoclopramide, GS-44 injection, Gabapentin.

Unfortunately, on 15-May, Missy's health status worsened with progression of neurological signs and reduced mentation – a partial seizure was not ruled out due to the rapid progression. Staff members were assigned to perform 24/7 monitoring inside Missy's hospitalisation quarters for the last 2 days of life. On 16-May, Missy stopped breathing suddenly at 01:55, and did not respond to resuscitation attempts with adrenaline and CPR.

## Convulsions / seizure activity (pre-2024) – monitoring ongoing:

JANET (ITAJU 1950) was sedated for the translocation process from SH2 in Hargeisa to Geed-Deeble on Jun 14, 2023. In the early stages of sedation, she experienced 2 convulsions with an interval of 10 minutes - each episode lasted 5-15 seconds. She was successfully stabilised with administration of low-dose atropine and has since recovered with no known complications or repeat episodes.

KAISE (ITAJU 2076) experienced two observed incidents of seizure activity in 2023; the first episode had an unknown cause, where Kaise was observed during and in the recovery stages (post-ictal). The second episode was due to contact with the lower electric wires at the enclosure perimeter (designed to prevent climbing and excursions out of the enclosures. No further episodes have been observed since, however we cannot rule out further episodes that may or may not have occurred unobserved, when staff are not in the vicinity. Kaise is stable and is not currently on anti-seizure medication, and is constantly being monitored for any changes.

## Gastrointestinal cases

Gastrointestinal related symptoms are commonly encountered in the resident population of cheetahs, although the incidence of cases has noticeably decreased since the translocation from the previous safe house facilities in Hargeisa, to the new facility at CRCC Geed Deeble. This has been primarily attributed to various management changes, including:

- Change to a more appropriate diet, from camel to goat - improved meat quality, more digestible, less fat
- Change to feeding regime - feeding every 2 days led to improved gastric emptying and digestive function, and reduced incidence of bloating, inappetence, and vomiting
- Introduction of carcass feeding using goat carcasses - more similar to natural diet
- Reduced stressors (more spacious enclosures, more natural environment, reduced ambient noise pollution)

Signs of GI disturbance varied in type and severity, but most commonly presented as the following, either alone or in multiple: regurgitation or vomiting; variable and/or decreased appetite, poor faecal scores (4 or 5 out of 5), presence of undigested meat, blood, or mucus in faeces, abdominal distension, abdominal discomfort, and delayed gastric emptying. Many of these signs are attributable to gastritis, a condition that is commonly encountered in cheetahs. Gastritis has various potential causes, including but not limited to: stress; dietary indiscretion or intolerance; infectious (viral, bacterial, or parasitic); medications that may have an irritant effect; ingestion of foreign gastric material. Since many of the resident population have had a degree of Feline Coronavirus (FCoV) exposure, underlying FCoV infection cannot be ruled out as a possible cause of gastrointestinal issues.

Diagnostic methods utilised to investigate gastrointestinal symptoms include: clinical examination (if temperament allows); blood collection and analysis (CBC and biochemistry); faecal collection and analysis (faecal flotation to identify parasitic eggs and McMaster's to

quantify); diagnostic imaging (radiographs and/or ultrasonography); and if indicated, explorative or corrective surgery under GA.

Undigested meat in faecals

Cheetahs that produced undigested meat in faecals to date in 2024 and which underwent treatment include:

- Teresa Group 0.7: ZERO (ITAJU 1994), VICKI 2 (ITAJU 1995), AYAAN (ITAJU 2012), TERESA (ITAJU 2015), SAN (ITAJU 2031), ZELDA* (ITAJU 2033), and VENUS (ITAJU 2037)
- Storm Group 3.0: LEO* (ITAJU 1928), STORM (ITAJU 1935), DUMA (ITAJU 1939)
- Kurro Group 0.5: LITTLE STAR (ITAJU 1838), MOONLIGHT (ITAJU 1839), LIBBO (ITAJU 1926), KURRO (ITAJU1930), ANDROMEDA (ITAJU 1938)
- SALIM (ITAJU 2075)
- MYZA (ITAJU 2090)
- KARIIR (ITAJU 2005)
- JANET (ITAJU 1950)
- FRIGGA* (ITAJU 1998)
- BAGHEER* (ITAJU 1981)
- IDRIS* (ITAJU 2008)
- Bandit Group: Sunny-Joe (ITAJU2131), Turo (ITAJU2132), Riks (ITAJU2133) Mercury (ITAJU2134, Buzz (2135)
- R&M Group: Rama (ITAJU2136), Madar (ITAJU2138)

*Individuals with a * were diagnosed with FIP and subsequently treated with GS-44, resulting in an improvement to appetite, BCS, and production of normal faecals without undigested meat. More about these FIP cases are found later in this report.*

Treatment protocols used in these individuals varied depending on severity of symptoms and clinical status.

For the more chronic cases of undigested meat in faecals (i.e. Kariir 0.1, Salim 1.0, Teresa Group 0.7, and the known chronic-FCoV shedders of Storm Group 3.0 and Kurro Group 0.5), a focus was placed on supporting the GI microbiome through the use of feline-specific probiotics (Purina Fortiflora Feline) – a good response was typically achieved after 14 days of daily treatment, with the treatment course extending by a further 6-8 weeks in total with dosing every 2 days. As of Dec 31, 2024, Teresa Group and Salim have completed their probiotic course due to marked improvement and maintenance of faecal scores 3 with no or minimal undigested meat present.

In the case of Teresa Group, a prolonged course of proton pump inhibitors (lansoprazole) and broad-spectrum antibiotics (amoxicillin-clavulanic acid) initiated in late 2023 did not lead to resolution. In 2024, a case review was made by the new lead veterinarian, and the decision was made to switch to probiotic support in the 5 worst offenders (Teresa, San, Zero, Venus, Zelda), which resulted in marked improvement to faecal scores and quality.

In the case of Kurro Group (0.5) and Storm Group (3.0), treatment with metronidazole was given due to consistent variable and deteriorating faecals. Treatment was given at 15 mg/kg for 14 days with very positive and long term results for Kurros group. As of Dec 31, Kurro group has had good faecals and nil further treatment has been required.

In the case of Storm's group, Storm and Duma didn't respond to treatment with metronidazole or probiotics. They were given vitamin treatment with Vitamin B12 + Vit E + Omega 3 + Probiotics (switching between Purina Fortiflora Feline and Protexin) to aid with digestion and both responded very well, resulting in marked improvement to faecal scores and quality.

In the case of individuals that experienced short-term vomiting / inappetence and undigested meat in faecals (Myza, Janet, CZ, Faysa, Azaar, Lorenzo, Sahmiye, Abdi, Pluto) was treated with Maropitant (Cerenia) in either injectable or oral form and fluid support (SQ), with blood work performed to rule out systemic changes.

Diet adjustments were made in some cases, with a switch from carcass or chunk meat to feeding mince, to aid absorption and digestion and thus promote an improved faecal score. Glittering for ongoing faecal monitoring was and continues to be used as an essential aid to determine the faecal scores for each individual animal.

Anti-parasitics (dewormers including praziquantel with/without fenbendazole) were administered in the event parasitic stages were identified on faecal flotation under microscopy (organisms encountered included Coccidia, hookworm, tapeworm - the latter 2 species being attributed to hunting prey species in enclosures and/or reduced meat quality from carcass feeding); however, oral deworming for all population was given a¿in April and November 2024 and will be performed every 6 months or earlier if required.

Dietary indiscretion:

In April 2024, SHUKRI (ITAJU 2124) ingested a piece of fabric, which was subsequently passed intact a week later, with no adverse clinical signs noted during and after this period.

MILO (SOPPA 0093), in August 2024, ingested part of his firehose hammock. Vomit was found containing remnants of the hammock. The hammock was removed, and he experienced two additional regurgitations over the next three days, each with pieces of the hammock. No further complications occurred after that.

In December 2024, CALLA (ITAJU 2089) was observed chewing on a Kong toy, raising concerns that small fragments of the toy may have been ingested. As a precautionary measure, she was treated with paraffin for two days. No complications or signs of obstruction were observed during or after the treatment.

In December 2024, VENUS (ITAJU 2037) ingested a piece of fabric, which was subsequently passed intact 3 days post ingestion. A clinical sign noted after expulsion was diarrhea, which resolved after adjustments in diet.

Oral

2024 cases

SIF (ITAJU 2001) displayed signs of oral discomfort and hypersalivation on 20-Mar, 2 days after a suspected spitting cobra encounter. She was sedated on 21-Mar-2024 for a diagnostic workup and oral ulcers were identified on the dorsal hard palate in the caudal oral cavity, attributed to possible spitting cobra venom contact. No tooth root abscesses, oral foreign bodies or other oral lesions were identified during the brief sedation. Broad-spectrum antibiotics were commenced by injection of amoxicillin/clavulanic acid; however, response was lacking and so a switch to clindamycin was made. Marked improvement followed the switch to clindamycin, with meloxicam administered alongside omeprazole for its gastroprotective properties to relieve associated pain and inflammation.

LEO (ITAJU 1928) was suspected to have been bitten or stung by a scorpion, spider, or snake, as inflammation was observed on his right lip on December 19th, . Within a few days, an abscess formed with minimal drainage. The abscess was cleaned daily, and analgesic and anti-inflammatory treatments were administered.

On December 21st, Leo was moved to the clinic for emergency care due to worsening symptoms, including lethargy, polydipsia, polyuria, loss of appetite, and dehydration. Under anesthesia, the abscess was fully drained and cleaned, revealing fistulas that extended nearly to the right nostril. An antibiotic (Convenia) was administered subcutaneously, and oral antibiotic therapy was continued.

As of December 31st, the abscess is being cleaned daily and has shown reduced inflammation.

## Historical (pre-2024) cases

Multiple individuals have erosions and/or ulcers present in their oral cavity and on their tongue - these lesions are a result of historical FHV and FCV viral outbreaks manifesting in oral lesions. As of 31-Dec-2024, these lesions are mainly aesthetic and do not cause discomfort or any issues with eating or drinking.

EMMET (ITAJU 1962) and RAJO (ITAJU 1961) had oral assessments performed under sedation in December 2021, due to concerns about oral and dental abnormalities. The Triadan system is in use when specific teeth have a numeric identifier. EMMET has a missing lower left (304) canine, while the lower right (404) canine had an exposed dental canal; erosions to the palate and tongue were noted. RAJO has moderate to severe enamel degeneration to the lower right (404) canine and multiple molars; erosions to the tongue were also noted. No further action has been taken since, as both individuals have remained stable with no evidence of oral discomfort.
JANET (ITAJU 1950) had palatine erosions identified during a procedure under sedation on April 22$^{nd}$ 2023, with one perforation at the left upper premolar. No complications have arisen since, although the findings have been noted due to the potential of respiratory issues arising from this defect.

In 2023, JOHNNY (ITAJU 1944), MICKEY (ITAJU 1945) and FRIGGA (ITAJU 1998) experienced inflammatory and ulcerative lesions affecting the oral cavity, which manifested

in hypersalivation and reduced appetite. An infectious cause (due to historical FHV / FCV exposure) was initially suspected, however adjacent enclosures were not affected despite the highly contagious nature of such viral infections. Ultimately, a toxic cause was suspected. All animals responded well to supportive treatment (pain relief) and dietary changes (minced meat).

# Ophthalmic cases

## Ocular issues arising from suspected contact with spitting cobra venom

Some of the resident cheetahs experienced suspected encounters with spitting cobra venom, which primarily manifested with acute onset of severe blepharitis, ocular secretion, and in a few instances superficial corneal ulcers in one or both of the affected eyes. Treatment is supportive in nature and is performed on the day of diagnosis, comprising thorough flushing of the affected eye(s) with 0.9% NaCl and administration of Dexamethasone (typically at doses of 0.25-0.35mg/kg). If needed and if any ulceration is present, topical antibiotics are applied to prevent deterioration and bacterial infection.

Table 49: Individuals treated for ocular issues arising from suspected spitting cobra encounters

| Name | ITAJU | Date |
|---|---|---|
| Sif | 2001 | 18-Mar-24 |
| Kariir | 2005 | 21-Mar-24 |
| Leylo | 2088 | 21-Mar-24 |
| Delphina | 2047 | 25-Mar-24 |
| Delta | 2110 | 30-Mar-24 |
| Sol | 2002 | 09-Apr-24 |
| Buzz | 2135 | 17-May-24 |
| Teresa | 2015 | 22-May-24 |
| Pacha | 2044 | 05-Jun-24 |
| Gashaan | 2070 | 18-Jun-24 |
| LH | 2048 | 18-Jun-24 |
| Kurro | 1930 | 17-Jul-24 |
| Rama | 2136 | 14-Aug-24 |
| Venus | 2037 | 08-Sep-24 |
| Venus | 2037 | 15-Sep-24 |
| Zero | 1994 | 15-Sep-24 |
| Pluto | 2035 | 15-Sep-24 |
| Riks | 2133 | 25-Oct-24 |

## Nictitating membrane (third eyelid) protrusion:

Bilateral protrusion of the third eyelid has been attributed to suspected viral flare ups (and therefore depressed immune status) caused by either: Feline Herpesvirus (FHV); Feline

Calicivirus (FCV); Feline Coronavirus (FCoV); or Torovirus (Haw's Syndrome) when concurrent with gastrointestinal signs.

During, primarily individuals belonging to the sub-adults group living in E4 Jasiri Group 5.4 have displayed bilateral nictitating membrane protrusion. Stress and resulting immune suppression due to high population density cannot be ruled out as contributing factors, although ultimately the exact pathogenesis is unknown. Clinical signs tend to be self-limiting within 4-6 weeks of onset, with no treatment required.

During September, several groups of resident cheetahs had a flare up, suspected to be calicivirus due to respiratory symptoms. Groups affected (Kurro group 5.0, Karrir group 6.0, Teresa group 0.7, Storm group 3.0, Cheeto group 5.0, Idris group 6.0, Jabari group 5.0, Serge and Major) received immune system boosting treatment, consisting in Omega 3 + Vit E + Vit B12 + Lysine, for a 2 week period and everyone resolved flare up for the exception of JANET (ITAJU 1950) and STORM (ITAJU 1935), who presented complications such as lethargy and running nose. Both required treatment with Meloxicam for 5 days and Clindamycin for 2 weeks. After treatment, both cheetahs went back to normal.

## Corneal ulceration

SANU (ITAJU 2074) was diagnosed with a significant but superficial corneal ulcer on the right eye on 14-Feb-2024. Fluorescein uptake was positive over an area of approx. 2x2 cm. Topical antibiotics were initiated. Blood was drawn and subsequently processed to develop autologous serum for topical application to stimulate the healing process, given Sanu's challenging temperament. Meloxicam was given PO to reduce associated pain and inflammation, aiding the healing process. Compliance with topical medications reduced after 5 days of treatment, however the ulcer healed sufficiently, confirmed with negative fluorescein uptake after 9 days of treatment.

## Dermatological cases

YAKU (ITAJU 2042) experienced facial dermatitis lesions (suspected due to chronic FHV) throughout 2023, however an improvement has been noted since translocation to Geed Deeble. At their most severe in 2022, lesions tended to be alopecic, erythemic, crusting, with secondary bacterial infections localised mainly on his nose, muzzle, and neck. In 2024 to date, there have been no signs of dermatitis, with no pigmentation changes or other skin lesions evident. Yaku is currently being maintained with daily administration of Famciclovir (as of June 30, 2024 1500mg BID), and daily skin health support provided in oral form (Omega-3 fish oil and Vitamin E). The current regimen has proven effective; previous attempts to reduce Famciclovir dosage have resulted in recurrence of dermatitis lesions.

LEO (ITAJU 1928) was noted to have some alopecia in the moustache area by the end of November 2024. Suspected to be herpesvirus but no skin lesions were observed. After taking a swab, bacterial infection with *Staphylococcus aureus* was positive. Received topical antibiotic cream and after 2 weeks, resolved.

## Miscellaneous cases

NASIIB (ITAJU 2071) was diagnosed with a hygroma over his right elbow in December 2023; surgical correction and drainage was attempted, with laboratory analysis of the effusion showing mixed inflammatory cells. Since the procedure, the swelling has refilled. As of 30 June 2024, the hygroma has reduced significantly in size and is not currently causing any pain nor mobility issues. Monitoring is ongoing due to the risk of the hygroma refilling.
Since 2023, MILO (SOPPA 0093) has experienced recurrent episodes of lethargy, reduced appetite, panting with an increase in total WBCs and neutrophils. Abnormal pelvic gait is sometimes seen. A pattern has emerged where the onset of episodes appears to be linked to stress events – in 2024, such events included visiting groups approaching Milo's enclosure and nearby construction. As the cause is unknown and diagnostic options are limited in Somaliland, supportive care was the primary mode of nurturing Milo through each episode. An immune-mediated condition is suspected. Since January, Milo has received gabapentin twice daily, which had a positive and calming effect until his last episode in September 2024, in which gabapentin didn't help as treatment. After necropsy, Milo was diagnosed with chronic asymptomatic gastritis. (see more in death, euthanasia and necropsy cases).

RAMA (ITAJU 2163) showed decreased appetite on the evening of the 24th, consuming only half of his diet. This was not unusual as he was recently dewormed and may have experienced mild stomach upset. He was treated with Cerenia and probiotics in the morning. His demeanor appeared normal and playful with Madar. However, during the morning check, he again consumed only half of his diet. He took his medications without issue, and a 3-4 fecal sample was found. He was reported as playful and interacted positively with staff before playing with Madar.

Later, he failed to respond to calls and usual cues. He was found hiding between rocks, hissing and displaying unusual confusion and aggression. Upon returning with food to lure him out, a fight broke out between Madar and Rama. Madar aggressively pursued Rama, requiring physical intervention to separate them.

Shortly after, Rama was discovered lying on the ground, panting rapidly and unresponsive, exhibiting signs of shock. He was carried back to his room, where he briefly regained awareness after a door noise startled him, causing him to jump and urinate on himself. Immediate treatment with dexamethasone IM to aid with the shock and Kyroligo IM was administered as a supplement. He gradually calmed down, though panting and drooling persisted for some time. Afterward, he began eating a blood pop and recognized familiar staff, showing affection and purring before resting.

A blood test later in the day revealed:

- CBC: WBC at 15 (high limit 19), with neutrophilia and leukopenia, consistent with stress and the dexamethasone injection.
- GHP: All parameters normal except elevated ALP at 102 (high limit 60), likely due to age and dexamethasone use, with no signs of liver damage.
- GLU: Normal at 7.61 (range 4.99–12.94).
- Electrolyte panel: Normal, with Ca:P ratio remaining 1:1.

The shock was attributed to a combination of stress and heat during the fight with Madar. It was noted that Rama displayed abnormal behavior before the fight, which may have triggered Madar's dominance behavior. A possible seizure was considered, as Rama has a history of a suspected seizure episode in the past. Another possibility is that a seizure or partial seizure occurred prior to the fight, provoking Madar's reaction.

Post-episode, no signs of ataxia or other neurological deficits were observed. Equilibrium remained intact, and his demeanor significantly improved, though his food drive was diminished. He consumed only 330g of food in the afternoon, requiring assisted feeding.

On the next morning  he was drooling with a head tilt but remained active and purring. Drooling resolved later, but he passed liquid diarrhea with undigested food and a foul odor. A fecal test was negative for parasites.

Supportive care included medications (Cerenia, paraffin, simethicone, prednisolone), subcutaneous fluids, and assisted feeding with a/d Hills. X-rays showed food in the stomach and significant gas, but ultrasound was unsuccessful due to stress. By afternoon, the head tilt had resolved, but he remained lethargic and refused further food, though he became more alert with fluids.

Bloodwork was normal, consistent with the previous day. The patient showed no ataxia and remained quiet but responsive.

On subsequent days, the patient showed positive recovery, adapting well to a mince diet. Diarrhea persisted, prompting a 7-day course of metronidazole, which he responded to successfully. Subcutaneous fluids were continued until the diarrhea resolved. By December 13th, he transitioned back to a bone-based diet. Up until this day (31-Dec-24) he's BAR and looking good,

## Viral diseases in resident population

The resident population has been exposed to and experienced various contagious viral diseases during their life to date, including Feline Coronavirus (FCoV) (and in some cases, the strain that mutates into FIP); Feline Herpesvirus (FHV); and Feline Calicivirus (FCV).

Efforts are made to practise good biosecurity and prevent viral disease transmission, although challenges arise from the environmental conditions (shifting sand, dirt, wind, dried faecal matter), and fenceline nose-to-nose contact between animals in adjacent enclosures that were constructed without a "squeeze gap".

Current biosecurity measures include washing of hands and arms, disinfection using >70% alcohol hand sanitiser, plus changes of clothes and footwear when moving between: the clinic enclosures and bush enclosure; between cub and sub-adults/adults; and between sick and healthy animals.

Brief summaries of the incidence and management of viral diseases are provided below.

## Feline Coronavirus (FCoV) and FIP

Feline Coronavirus (FCoV) serum antibody titres are present within most individuals of the resident population, indicating exposure. Since transmission is achieved through various routes including: directly between animals by the faecal-oral route, indirectly by environment (spreading of contaminated sand/soil by water and wind), or through fomites (clothing, footwear, cleaning or feeding implements), management and control is a constant challenge. Although the virus is fragile, it can survive for up to 7 weeks in dry environments.

Surveillance and monitoring of the animals through serological and faecal testing is routinely performed via the following methods: faecal samples are collected every 3 months, and processed for external FCoV PCR testing in either the UK or USA. Blood is collected throughout the year, and spun down into serum; the serum is then tested at external institutions for FCoV antibody titres.

## FIP Cases

Feline Infectious Peritonitis (FIP) arises from the mutation of FCoV into a highly virulent strain that can result in various forms: wet FIP (with effusions), dry FIP (no effusions), neurological and ocular forms. The strain causing FIP, the mutated virus, is cell-associated and is not commonly transmitted directly between cats. The combination of multiple stress-associated risk factors is suspected to contribute to the mutation of FCoV into the FIP-inducing strain.

Risk factors contributing to the occurrence of the mutation are primarily stress-related. All of the animals experienced some or all of the following stressors in the weeks before diagnosis:

- High density per area (overcrowding in the previous safe house facilities due to limited space)
- Dietary stress (poor quality meat or less appropriate diet when the diet was primarily camel)
- Infections (including FHV, FCV, Coccidia) and resulting immune suppression
- Environmental stress (spitting cobra encounter, abrupt weather changes)
- Stress arising from animal introductions and translocation

Between Jan-Dec 2024, 7 cases of FIP were diagnosed. The earliest diagnosis was made in January, with the most recent diagnosis having been made in December. Two animals were aged 3 years at the time of diagnosis, Two aged 2 years, two aged 4 years and one aged 5 years at time of diagnosis . This year we had two neurological cases, four wet cases and one dry case.

Table 50: summary of FIP cases diagnosed and treated with GS-44 since 2023

| Animal name and details | Case details |
|---|---|
| GAMMA<br>(ITAJU 2098)<br>Male | **Date of diagnosis:** March 25th 2023<br>**Form of FIP diagnosed:** Wet |

| | |
|---|---|
| Date of birth (approx.): 19-Dec-2021<br>Age at time of FIP diagnosis: 1y 4m | **History and findings at time of diagnosis:** Repeated episodes of anorexia, slow movement on walk, undigested meat found in faeces. Anaesthetised for workup due to temperament; pendulous abdomen on clinical examination with free peritoneal fluid observed on ultrasonography - aspirate tested positive on Rivalta test. A/G ratio 0.5 on serum biochemistry at time of diagnosis<br>**Date treatment started:** March 25th 2023<br>**Treatment details:** GS-44 injection (43 days total; started on 6mg/kg/day, reduced to 5mg/kg/day for 13 days and 4mg/kg/day for 9 days due to insufficient stock to treat 2 animals). Switched to GS-44 oral on May 7th 2023 when stock arrived. GS-44 oral treatment duration of 41 days total to complete recommended 84-day total treatment course (doses varied between 12-15mg/kg/day depending on capsule availability). Liver supplements introduced after elevation in liver enzymes noted on bloodwork. Developed necrotic skin lesions at injection sites - resolved with supportive treatment.<br>**Date treatment completed:** June 16th 2023<br>**Current status:** stable and healthy, 12-month post-GS-44 treatment bloodwork performed on 16-Jun-24 showed stable bloodwork including A/G ratio of >1.0. No relapse since cessation of GS-44 treatment |
| DAHAB<br>(ITAJU 2086)<br>Female<br>Date of birth (approx.): 01-Nov-2021<br>Age at time of FIP diagnosis: 1y 5m | **Date of diagnosis:** April 7th 2023<br>**Form of FIP diagnosed:** Wet<br>**History and findings at time of diagnosis:** Anorexia for 4 days, abdominal discomfort. Pendulous abdomen and reactive lymph nodes on clinical examination under sedation. Free peritoneal fluid identified on ultrasonography - aspirate tested positive on Rivalta test. A/G ratio 0.8 on serum biochemistry at time of diagnosis<br>**Date treatment started:** April 7th 2023<br>**Treatment details:** GS-44 injections (30 days total at reduced dose of 4mg/kg/day due to insufficient stock to treat 2 animals). Switched to GS-44 oral on May 7th 2023 when stock arrived. GS-44 oral treatment duration of 54 days total o complete recommended 84-day total treatment course (doses varied between 12-15mg/kg/day depending on capsule availability).<br>**Date treatment completed:** June 23rd 2023<br>**Current status:** stable and healthy, 12-month post-GS-44 treatment bloodwork performed on 30-Jun-24 showed stable bloodwork including A/G ratio of >1.0. No relapse since cessation of GS-44 treatment |
| BISHAARO<br>(ITAJU 2073)<br>Female<br>Date of birth (approx.): 19-Sep-2021<br>Age at time of FIP diagnosis: 1y 8m | **Date of diagnosis:** May 15th 2023<br>**Form of FIP diagnosed:** Wet<br>**History and findings at time of diagnosis:** Abdominal pain, pendulous abdomen, suspected weight loss. Abdominal radiographs - distended stomach with full contents, gas-filled intestines. Free peritoneal fluid. identified on ultrasonography - aspirate result positive on Rivalta test. A/G ratio 0.7 on serum biochemistry at time of diagnosis<br>**Date treatment started:** May 15th 2023<br>**Treatment details:** GS-44 injections (14 days total at 6mg/kg/day). Switched to GS-44 oral June 5th 2023 due to development of necrotic skin lesions at injection sites which resolved with supportive treatment. GS-44 oral treatment duration of 70 days total at dose rate of 14mg/kg/day to complete recommended 84-day total treatment course (initial 7 days of oral treatment mistakenly given at higher dose of 42mg/kg/day due to communication error - no adverse effects were identified).<br>**Date treatment completed:** August 6th 2023<br>**Current status:** stable and healthy, A/G stable at >1.0, no relapse since cessation of GS-44 treatment. Post-treatment monitoring ongoing |
| KARIIR<br>(ITAJU 2005)<br>Female<br>Date of birth (approx.): 01-Jan-2020 | **Date of diagnosis:** May 26th 2023<br>**Type of FIP diagnosed:** Dry<br>**History and findings at time of diagnosis:** Anorexic for 4 days, progressive lethargy and abdominal pain. Exploratory laparotomy performed on May lesions consistent with Dry FIP observed (lymphocytic plaques on spleen). A/G ratio 0.6 on serum biochemistry at time of diagnosis<br>**Date treatment started:** May 26th 2023 |

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| Age at time of FIP diagnosis: 3y 5m | **Treatment details:** GS-44 injections (dose of 6mg/kg/day for 2 days initially); lack of expected response to treatment resulted in combination of injectable and oral GS-44 being administered (14-15mg/kg/day) for 6 days. Switched to GS-44 oral only on June 3rd 2023 due to arrival of new (higher concentration) capsules. GS-44 oral only treatment total duration of 90 days at dose rate of 15mg/kg/day (recommended 84-day treatment course extended with consideration to clinical response to GS-44 earlier in treatment course). The total treatment course for Kariir lasted 98 days (14 days longer than the typical 84-day schedule). Developed necrotic skin lesions at injection sites, which were resolved with supportive care.<br><br>**Date treatment completed:** August 17th 2023<br><br>**Current status:** stable and healthy, A/G ratio consistently >1.0 during 2024 serial bloodwork, no relapse since cessation of GS-44 treatment Treatment for chronic neurological condition (bilateral hypermetric forelimb gait since Dec 2021) ongoing with no deterioration. Post-treatment monitoring ongoing |
| SIF<br><br>(ITAJU 2001)<br><br>Female<br><br>Date of birth (approx.): 01-Dec-2019<br><br>Age at time of FIP diagnosis: 3y 11m | **Date of diagnosis:** November 17th 2023<br><br>**Form of FIP diagnosed:** Dry<br><br>**History and findings at time of diagnosis:** Abnormal gait - concerns about historical forelimb fracture. Diagnostic workup performed under sedation - radiograph of abdomen revealed intestinal abnormality. Exploratory laparotomy performed to remove intestinal mass. Post-surgical recovery inadequate - not as expected, GS-44 trial initiated - responded positively within 24h. A/G ratio 0.7 on serum biochemistry at time of diagnosis<br><br>**Date treatment started:** May 26th 2023<br><br>**Treatment details:** GS-44 injections (3 days total at 6mg/kg/day), switched to oral GS-44 on November 20th 2023 due to concerns of prolonged injections causing necrotic injection site skin lesions. GS-44 oral treatment duration ongoing, planned for 81 days to complete recommended 84-day treatment course.<br><br>**Date treatment completed:** February 8th 2024<br><br>**Current status:** stable and healthy, A/G ratio consistently >1.0 during 2024 serial bloodwork, no relapse since cessation of GS-44 treatment. Post-treatment monitoring ongoing |
| FRIGGA<br><br>(ITAJU 1998)<br><br>Male<br><br>Date of birth (approx.): 01-May-2020<br><br>Age at time of FIP diagnosis: 3y 8m | **Date of diagnosis:** January 20th 2024<br><br>**Form of FIP diagnosed:** Wet<br><br>**History and findings at time of diagnosis:** Progressive hyporexia, reduced appetite, reduced faecal output, lethargy, weight loss. A/G ratio 0.6 on date of diagnosis<br><br>**Date treatment started:** January 20th 2024<br><br>**Treatment details:** GS-44 injections (7 days total at 6mg/kg/day). Switched to GS-44 oral January 27th 2024 due to increasingly aggressive behaviour (normal for Frigga when in good health). Providing no deterioration or decrease to A/G, expected GS-44 oral treatment at current dose for 77 days to complete recommended 84-day total treatment course<br><br>**Date treatment completed:** May 11th 2024<br><br>**Current status:** Significant improvement to health status noted within 48h of starting GS-44. At time of writing, stable and healthy, no relapse, bloodwork improved, A/G maintaining >1.0. Post-GS-44 treatment monitoring is ongoing. |
| BAGHEER<br><br>(ITAJU 1981)<br><br>Male<br><br>Date of birth (approx.): 01-Jan-2020<br><br>Age at time of FIP diagnosis: 4y 0m | **Date of diagnosis:** January 22nd 2024<br><br>**Form of FIP diagnosed:** Wet<br><br>**History and findings at time of diagnosis:** Reduced appetite and activity, abdominal discomfort. Abdominal radiographs - distended stomach with >75% full contents, gas-filled intestines. A/G ratio 0.5 on serum biochemistry 2 days before GS-44 treatment started |

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| | **Date treatment started:** January 22nd 2024<br><br>**Treatment details:** GS-44 injections (5 days total at 6 mg/kg/day). Switched to GS-44 oral on January 27th due to development of erythema at injection sites. Increased GS-44 oral dose to 9.23 mg/kg on February 9th due to decrease in A/G ratio to 0.5 despite no deterioration in clinical status.<br><br>**Date treatment completed:** May 11th 2024<br><br>**Current status:** Significant improvement to health status noted within 48h of starting GS-44. At time of writing, stable and healthy, no relapse, bloodwork improved, A/G maintaining >1.0. Post-GS-44 treatment monitoring is ongoing. |
| IDRIS<br><br>(ITAJU 2008)<br><br>Male<br><br>Date of birth (approx.): 01-Jul-2020<br><br>Age at time of FIP diagnosis: 3y 9m | **Date of diagnosis:** April 15th 2024<br><br>**Form of FIP diagnosed:** Dry (Suspected)<br><br>**History and findings at time of diagnosis:** Reduced appetite and activity, abdominal discomfort. Abdominal radiographs - distended stomach with >75% full contents, gas-filled intestines. A/G ratio 0.5 on serum biochemistry 2 days before GS-44 treatment started<br><br>**Date treatment started:** April 16th 2024<br><br>**Treatment details:** GS-44 injections (8 days total at 6 mg/kg/day). Switched to GS-44 oral on April 24th at 12 mg/kg. Increased GS-44 oral dose to 15.2 mg/kg on May 5th due to A/G remaining below 1.0, and increased again to 16.3 mg/kg on Jun 2nd due to arrival of new more concentrated capsules and to maintain minimum 15mg/kg dose given increased BCS.<br><br>**Date treatment completed:** July 8th 2024<br><br>**Current status:** Significant improvement to health status noted within the first 48h of starting GS-44. Bloodwork and health status improved with increased appetite and activity noted. A/G increased to>1.0.At time of writing, stable and healthy, no relapse, bloodwork improved, A/G maintaining >1.0. Post-GS-44 treatment monitoring is ongoing. |
| HAKIM<br><br>(ITAJU 2113)<br><br>Male<br><br>Date of birth (approx):<br><br>01-Jan-2022<br><br>Age at time of FIP diagnosis: 2y 6m | **Date of diagnosis:** July 8th 2024<br><br>**Form of FIP diagnosed:** Wet (suspected)<br><br>**History and findings at time of diagnosis:** Reduced appetite and activity, abdominal discomfort, balloted abdomen, inappetence. A/G ratio 0.7 on serum biochemistry 1 day before GS-44 treatment started.<br><br>**Date treatment started:** July 8th 2024<br><br>**Treatment details:** GS-44 injections (4 days total at 6 mg/kg/day). Switched to GS-44 oral on July 12th at 15 mg/kg due to necrosis noted on injection sites. Increased GS-44 oral dose because he was re-weight (went from 22 kg to 24.5kg) on September 18th and due to A/G remaining below 1.0..<br><br>**Date treatment completed: Nov** 2nd 2024<br><br>**Current status:** Significant improvement to health status noted within the first 24h of starting GS-44. Bloodwork and health status improved with increased appetite and activity noted. A/G increased to>1.1 as of Nov-2024. At time of writing, stable and healthy, no relapse, bloodwork improved. Post-GS-44 treatment monitoring is ongoing. |
| ZELDA<br><br>(ITAJU 2033)<br><br>Female<br><br>Date of birth (approx):<br><br>01-Aug-2020 | **Date of diagnosis:** August 1st 2024<br><br>**Form of FIP diagnosed:** Neurological (Suspected)<br><br>**History and findings at time of diagnosis:** Lameness, lack of equilibrium, reduced appetite, low activity and abdominal discomfort. Abdominal radiographs - distended stomach with >75% full contents, gas-filled intestines. A/G ratio 0.4 on serum biochemistry at day GS-44 treatment started |

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| Age at time of FIP diagnosis: 4y 0m | **Date treatment started:** August 1st 2024<br><br>**Treatment details:** GS-44 injections (8 days total at 6 mg/kg/day). Added 12 mg/kg PO due to suspicion that she had neurological FIP, making a total of 13 days of injectable GS-44. Switched to GS-44 oral on 14th at 20 mg/kg. Finished treatment after 94 days<br><br>**Treatment completion date: Nov 2nd** 2024<br><br>**Current status:** no improvement to health status noted within the first 48h of starting GS-44. Re took X rays and found that due to status caused by FIP, she also had an obstruction with bone in the stomach. After surgery significant improvement was seen but could still see lack of complete equilibrium, which is why it was decided to increase dose at neurological FIP treatment resulting in resolution of neuro signs. Bloodwork and health status improved with increased appetite and activity noted. A/G increased to>1.1 as of Nov-2024. At time of writing, stable and healthy, no relapse, bloodwork improved. Post-GS-44 treatment monitoring is ongoing. |
| LEO<br>(ITAJU 1928)<br>Male<br>Date of birth (approx):<br>01-Jan-2019<br>Age at time of FIP diagnosis: 5y | **Date of diagnosis:** September 15th 2024<br><br>**Form of FIP diagnosed:** Neurological (Suspected)<br><br>**History and findings at time of diagnosis:** Ataxia, ambulatory paraparesis, chronic diarrhea, chronic abnormal high liver enzymes (AST+ALT)<br><br>**Date treatment started:** September 15th 2024<br><br>**Treatment details:** GS-44 injections (5 days total at 6 mg/kg/day SQ plus 12 mg/kg PO). Switched to just oral GS-44 on Sep 20th at 20 mg/kg. Skipped one dose on the 19th of November due to disease so was given an extra day of treatment, making a total of 85 days.<br><br>**Treatment completion date:** December 8th 2024<br><br>**Current status:** Neurological signs resolved after 5 days of treatment. A/G improved to 1.1 and improvement on diarrhea. |
| ABDI<br>(ITAJU 2125)<br>Male<br>Date of birth (approx):<br>15-Oct-2022<br>Age at time of FIP diagnosis: 2y 2m | **Date of diagnosis:** Dec 16th 2024<br><br>**Form of FIP diagnosed:** Wet<br><br>**History and findings at time of diagnosis:** Reduced appetite and activity, abdominal discomfort. A/G ratio 0.5 on serum biochemistry 1 day before GS-44 treatment started.<br><br>**Date treatment started:** Dec 17th 2024<br><br>**Treatment details:** GS-44 injections (4 days total at 6 mg/kg/day). Switched to GS-44 oral on Dec 21th at 15 mg/kg. On Dec 24th A/G improved at 0.8. ALB + TP + GLO within normal and improvement on CBC.<br><br>**Expected treatment completion date:** March 10th 2025<br><br>**Current status:** Significant improvement to health status noted within the first 24h of starting GS-44. Bloodwork and health status improved with increased appetite and activity noted. A/G increased to 0.8 as of -Dec-2024, current oral dose of GS-44 is 15 mg/kg. |

All cases were placed onto GS-44 treatment (injectable and oral forms). This medication is generously provided by a donor based in the USA, and without their assistance, these cases would likely have succumbed to the fatal nature of the FIP disease process (when left untreated). To the donor, we owe our immense gratitude.

All FIP cases undergo frequent monitoring: blood samples are collected and analysed once weekly (or as needed depending on response to treatment) for the first 2-3 weeks after starting GS-44 treatment, then monthly for the remaining duration of treatment. Faecal samples are collected weekly for the entire duration of treatment.

After the completion of minimum 84 days of treatment with GS-44, blood samples are collected weekly for the first 2 weeks post-end of treatment, then every 3 months for 12 months post-end of treatment. Faecal samples are collected 1-week post-end of treatment, then once monthly for 6 months, then every 3 months, finally syncing into the routine quarterly faecal collection schedule.

## Feline Calicivirus (FCV) and Feline Herpesvirus (FHV)

Viral flare ups of FCV and FHV, while previously a frequent occurrence in the population when residing at the safe houses in Hargeisa, have almost never encountered by the resident population since translocating to Geed Deeble in 2023.

Due to the lack of specialised veterinary laboratories in this region, testing (by serology or other methods) is not a possibility, so tracking the exact cause of the flare up in real time is not possible. Differential diagnoses are made based on: the onset, duration, and severity of clinical signs and transmission of such clinical signs to adjacent enclosures.

Clinical signs for FHV observed in the resident population are typically upper respiratory in nature, manifesting as sneezing with protruding bilateral nictitating membranes, and in cases like YAKU (ITAJU 2042), facial dermatitis lesions. Clinical signs for FCV observed in the resident population are typically oral and tongue ulcers with associated pain and inflammation, hypersalivation, suspected pyrexia and reduced appetite. Treatments for both FHV and FCV are supportive in nature, including but not limited to: fluids to correct dehydration, pain relief, or antibiotics (if concerns about secondary bacterial infection exists).

All residents are vaccinated using a FVRCP killed type (inactivated) vaccine. The primary brands used in 2024 to date are the Elanco truFel HC2P and truFel Ultra HC2P vaccines.

A management decision to bring forward all booster vaccinations to February/March 2024 was enacted successfully, to ensure all animals are vaccinated at the same time of year

## Rabies

No cases of rabies have been encountered in the resident population to date. All animals are vaccinated to prevent infection due to the increased risk posed by wildlife sources residing in the CRCC area, and also for public health, to prevent zoonotic transmission to CCF staff.

All residents are vaccinated using a Rabies killed type (inactivated) vaccine. The primary brand used in 2024 to date is Nobivac Rabies (10 ml multidose).

A management decision to bring forward all booster vaccinations to February/March 2024 was enacted successfully, to ensure all animals are vaccinated at the same time of year.

## Canine Distemper Virus (CDV)

Canine distemper is a highly contagious viral disease of wild and domestic carnivores. Although it is principally a viral infection infecting canids, there is a risk of transmission to the resident cheetah population through carnivores inhabiting the Geed Deeble facility (including dogs, polecats, mongoose, etc).

2023 marked the first year where all residents were vaccinated as a preventative measure against CDV infection, using an inactivated Canine Distemper Vaccine sourced from South Africa. This same vaccine type was used to date in 2024.

Vaccinations were also performed with consideration to the deaths of 2 cheetahs during 2022, both of which experienced neurological symptoms and progressive decline in health status. Although the cause in both cases was undetermined, and testing for CDV was inconclusive, it was still a possibility.

A management decision to bring forward all booster vaccinations to May 2024 was enacted successfully, to ensure all animals are vaccinated at the same time of year, with booster doses (and restart courses for adults which were FIP-positive in 2023) completed in May/June 2024.

All new intake primary courses of vaccinations finished successfully in August 2024. (RAMA ITAJU 2136 and MADAR ITAJU 2138)

## Procedures and examinations

Between January and December 2024, CCF Somaliland performed a total of 37 procedures. For clarification, a procedure is a diagnostic workup or medical intervention, performed while conscious or under anaesthesia (sedation or General Anaesthesia, GA)

While a procedure under anaesthesia allows, for example, a higher quality of diagnostic imaging to be obtained, the benefits vs risks of performing a procedure conscious vs anaesthetised for each individual are assessed on a case-by-case basis, factoring in the animal's health status, temperament, safety, and procedure type.

Thanks to the efforts of Animal Care Staff during 2023 (before and after the translocation from the city to the CRCC), the resident population of cheetahs are conditioned to allow conscious blood draws during behavioural restraint (during feeding by an animal keeper). In some cases, the temperament of an animal and the competence of the staff involved may allow a conscious procedure to be safely performed during behavioural restraint.
In total there were 4 cases requiring surgical intervention, with the remaining procedures being diagnostic or therapeutic in nature.

Table 51: Summary of procedures performed while conscious (without anaesthesia) from Jan-Dec 2024

| # | ITAJU | Name | Sex | Date of Procedure | Procedure Type and Reason |
|---|---|---|---|---|---|
| **1** | 1981 | Bagheer | M | 22-Jan-2024 | Abdominal imaging (radiographs, ultrasonography)<br>Investigate reduced appetite, abdominal distension |
| **2** | 2000 | Shamsi | M | 08-Feb-2024 | Debride necrotic skin on lateral abdomen – behavioural restraint during feeding |
| **3** | 2076 | Kaise | M | 14-Feb-2024 | Pelvic radiographs – mobility check follow up |
| **4** | 2008 | Idris | M | 10-Apr-2024 | Abdominal imaging – radiographs and ultrasound to investigate reduced appetite & abdominal discomfort |
| **5** | 2008 | Idris | M | 13-Apr-2024 | Repeat abdominal imaging – behavioural restraint<br>Follow up to reassess GI motility |
| **6** | 2128 | Aamiina | M | 19-Apr-2024 | Abdominal radiographs performed to rule out possible obstruction due to vomiting prior to seizure event |
| **7** | 2128 | Aamiina | M | 21-Apr-2024 | Abdominal ultrasound performed to rule out free fluid and to assess GI motility |
| **8** | 2136 | Rama* | M | 27-Apr-2024 | Abdominal imaging – physical restraint*<br>Investigate causes of vomiting, rule out GI obstruction |
| **9** | 2128 | Aamiina | M | 28-Apr-2024 | Abdominal radiograph performed to assess GI tract |
| **10** | 2129 | Miss Behave | F | 06-May-2024 | Radiographs of abdomen to assess GI tract<br>Radiographs of pelvic region to rule out abnormalities |
| **11** | 2129 | Miss Behave | F | 09-May-2024 | Radiographs of abdomen – follow up – reassess GI contents |
| **12** | 2129 | Miss Behave | F | 14-May-2024 | Radiographs of abdomen – follow up – reassess GI contents |
| **13** | 2129 | Miss Behave | F | 15-May-2024 | Radiographs of abdomen – follow up – reassess GI contents |
| **14** | 2138 | Madar | M | 20-May-2024 | Radiographs – abdomen<br>Investigate abdominal distension on intake |
| **15** | 2132 | Turo | M | 01-Jun-2024 | Radiographs – bilateral forelimbs |
| **16** | 2138 | Madar | M | 05-Jun-2024 | Radiographs – bilateral forelimbs |
| **17** | 2033 | Zelda | F | 31-Jul-2024 | Radiographs – bilateral forelimbs<br>Radiographs – abdomen |
| **18** | 2033 | Zelda | F | 01-Aug-2024 | Ultrasound- abdomen |
| **19** | 2033 | Zelda | F | 06-Aug-2024 | Radiographs- abdomen- follow up after surgery |
| **20** | 2033 | Zelda | F | 08-Aug-2024 | Radiographs- abdomen- follow up after surgery |
| **21** | 1928 | Leo | M | 18-Nov-2024 | Radiographs of abdomen to assess GI tract |
| **22** | 2136 | Rama | F | 26-Nov-2024 | Abdominal radiographs performed to rule out possible obstruction due to abdominal pain, strong diarrhea and drooling |
| **23** | 2136 | Rama | M | 27-Nov-2024 | Radiographs of abdomen – follow up – reassess GI contents |
| **23** | 2122 | Faysa | F | 01-Dec-2024 | Abdominal radiograph performed to assess GI tract due to reduced food drive |
| **24** | 2037 | Venus | F | 11-Dec-2024 | Left forelimb radiographs due to swelling and lameness |
| **25** | 2037 | Venus | F | From 11th-Dec-2024 to 31st- Dec-2024 | Cleaning and debridement of necrosis/abscess due to scorpion bite. |

**Behavioural restraint (during feeding) was used in all cases except for Rama, where physical restraint was used*

## Procedures performed conscious (without anaesthesia) – case summaries

BAGHEER (ITAJU 1981) had abdominal imaging (lateral radiographs and abdominal ultrasonography) performed on 22-Jan-24 to investigate a visibly distended abdomen, reduced appetite, and lethargy. Along with the bloodwork, FIP was diagnosed.

SHAMSI (ITAJU 2000) had experienced long-standing wound-healing issues relating to an overgrooming (lick) wound on the right lateral abdomen that had developed during the hospitalisation period post-surgery after foreign body removal in November 2023. On 08-Feb-2024, the superficial layer was visibly necrotic and started to detach. Shamsi tolerated the debridement of the necrotic skin during behavioural restraint (keeper feeding at shift area) without any issues. Topical application of honey to the wound area was then commenced, with resolution achieved in May-2024.

KAISE (ITAJU 2076) had follow-up radiographs performed conscious during behavioural restraint (keeper feeding at shift area) as a follow up check to reassess pelvic mobility. Ventral displacement of the right iliac wing was observed.

IDRIS (ITAJU 2008) had 2 instances of imaging performed while conscious on 10-Apr-2024 (radiographs and ultrasonography) and 13-Apr-2024 (radiograph only) to investigate reduced appetite, reduced activity, reduced BCS and undigested meat in faecals. FIP was diagnosed and GS-44 treatment commenced on 16-Apr-2024.

AAMIINA (ITAJU 2128) underwent multiple instances of abdominal imaging while conscious throughout a period of ill health in April 2024

*RAMA (ITAJU 2136) had abdominal radiographs performed under physical restraint due to Rama's small size, and lack of food drive due to acute onset of vomiting and polydipsia. A foreign body and obstruction were ruled out.

MISS BEHAVE (ITAJU 2129) had multiple radiographs performed between 29-Apr-through to 15-May-2024, initially to investigate abnormal pelvic mobility and later to investigate reduced appetite, lethargy, reduced faecal output.

MADAR (ITAJU 2138) had abdominal radiographs performed on intake on 20-May-2024 due to a visibly distended abdomen. Inflamed GIT was identified. Both a foreign body and obstruction were ruled out. Madar subsequently had follow-up radiographs performed to assess both forelimbs, due to ongoing right forelimb lameness since arrival.

TURO (ITAJU 2132) had conscious radiographs performed of both forelimbs to assess abnormal bilateral forelimb conformation. Abnormal curvature of the radius and ulna were identified, with further testing and investigations ongoing at the time of writing.

ZELDA (ITAJU 2033), in July 2024, possible trauma was suspected because she was found limping, in pain and with little stability. The x-ray examination was done and did not reveal any obvious fracture or injury in the forelimbs and/or hind limbs, however, it revealed a large amount of gas and signs of paresis in the intestines, which were initially associated with trauma since after receiving analgesic treatment, her appetite and attitude improved. After two days, an ultrasound examination was performed since Zelda was lethargic, had no appetite and a very distended stomach. After taking blood samples, it was concluded that she was suffering from FIP since the results were typical of the disease: high TP + GLO, low ALB, A / G reduced to 0.4, increased TBIL and low BUN, accompanied by an increase in WBC.
With no improvement, she was anesthetized for a full examination. X-rays revealed that due to stasis caused by FIP, a bone had become lodged at the entrance to the pylorus and was surgically removed. After surgery, follow-up x-rays were performed with evidence of bowel movement. After a month in the clinic, she was discharged and returned to her enclosure.

LEO (ITAJU 1928) was found to be inappetence in November 2024, which is very unusual for him since he is an animal with a very high food drive. The stomach looked very distended and the presence of fluid was suspected due to resistance to treatment with GS-44. X-rays were taken in his enclosure but because there was a lot of sunlight and he was not hungry, the images were not clear, so he was anesthetized to take him to the clinic for examination.

RAMA (ITAJU 2136) he had abdominal x-rays on the 26th of November due to a shock episode the day before, diarrhea and drooling. Obstruction/foreign body was ruled out but stomach was full of contents. Follow up x rays on the next day showing improvement and emptying of the stomach.

FAYSA (ITAJU 2122) had abdominal imaging (lateral radiographs) performed on 01-Dec-24 to investigate reduced appetite for two days. Nothing abnormal was shown in x rays; normal food drive and attitude after 2 days.

VENUS (ITAJU 2037) initially presented with non-weight-bearing lameness on the left front limb. Palpation localized the issue to the foot. X-rays revealed soft tissue swelling in the mid radial/ulnar region, with no bone involvement. Scattered small air pockets were observed in the soft tissues of the distal aspect of the third toe. An abscess developed two days later, and from December 11th to December 24th, debridement and wound care were performed in her enclosure during behavioral restraint without complications.

On December 24th, VENUS was brought to the clinic for debridement under anesthesia. Based on the size and location of the abscess, it was suspected that the injury had been caused by a snake or scorpion bite, which likely led to localized necrosis and a subsequent pseudomonas infection.

**Table 52: Summary of procedures performed under anaesthesia (sedation / GA) from Jan-Jun 2024**

| # | ITAJU | Name | Sex | Date of Procedure | Reason |
|---|---|---|---|---|---|
| 1 | 2071 | Nasiib | M | 03-Jan-2024 | Sedated to insert a Penrose drain into the right elbow hygroma |

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| **2** | 1998 | Frigga | M | 16-Jan-2024 | Sedated to perform abdominal imaging to investigate reduced appetite and lethargy |
| **3** | 1998 | Frigga | M | 20-Jan-2024 | Sedated for follow-up imaging; progressed to surgery (exploratory laparotomy) under GA |
| **4** | 2001 | Sif | F | 21-Mar-2024 | Investigate cause of prolonged hypersalivation and oral discomfort |
| **5** | 2033 | Zelda | F | 03-Aug-2024 | Performed gastrostomy to remove piece of bone in the stomach causing obstruction |
| **6** | 1928 | Leo | M | 28-Sep-2024 | Sedated to perform x rays and ultrasound due to abnormal increase in liver enzymes and chronic diarrhea |
| **7** | SOPPA0093 | Milo (Leopard) | M | 8-Oct-2024 | Sedated to perform x rays and ultrasound due inappetence, vomits and dehydration |
| **8** | SOPPA0093 | Milo (Leopard) | M | 10-Oct-2024 | Sedated to perform gastrostomy due to suspicion of ulcer in the stomach. |
| **9** | 1928 | Leo | M | 19-Nov-2024 | Sedated to perform x rays and ultrasound due to abnormal bloating of the stomach, lethargy and inappetence. |
| **10** | 2125 | Abdi | M | 17-Dec-2024 | Sedated to perform x rays and ultrasound due to decrease in food drive, lethargy and abdominal distention. |
| **11** | 1928 | Leo | M | 20-Dec-2024 | Emergency sedation due to lethargy, imbalance, inappetence and abnormal shaking. |
| **12** | 2037 | Venus | F | 24-Dec-2024 | Sedation to debride abscess in paw and remove maggots. |

## Procedures performed under anaesthesia - case summaries

NASIIB (ITAJU 2071) was anaesthetised on Jan 3rd 2024 to place a Penrose drain into the Right elbow hygroma that had undergone attempted surgical correction on Dec 12th 2023. Drain placement was unsuccessful due to the lack of compliance and an inability to maintain an elastic bandage over the wound to aid placement.

FRIGGA (ITAJU 1998) was sedated on 16-Jan-2024 to perform a diagnostic workup due to worsening health status (inappetence, abdominal discomfort) and inability to perform a conscious workup due to temperament. A second sedation was performed on 20-Jan-2024 for follow-up diagnostic imaging. Due to inconclusive abdominal imaging findings, the lead vet made the decision to proceed to surgery (exploratory laparotomy) under General Anaesthesia. The exploratory laparotomy revealed lesions consistent with dry-form FIP (plaques on the spleen and liver, plus a granuloma in the ilio-caecal region of the intestines), plus a small amount of peritoneal fluid was observed (which was not identified on ultrasonographic examination under sedation).

Due to Frigga's temperament, a GS-44 injection was administered while under GA, in addition to meloxicam for pain relief and to aid post-surgical recovery, and a broad-spectrum amoxicillin/clavulanic acid injection due to presence of peritonitis with the appearance of early septic changes (blood and discolouration). Frigga improved with continued GS-44 injections, with a 4-day course of oral meloxicam and a 5-day course of oral amox/clav completed alongside. Intradermal sutures were placed, removing the necessity for suture removal. Hospitalisation and return to E13 was completed 10 days post-surgery, with

attainment of satisfactory post-surgical wound-healing and improvement both to bloodwork and health status, indicating good response to GS-44 treatment.

SIF (ITAJU 2001) was sedated on 21-Mar-2024 for a diagnostic workup due to non-resolving hypersalivation and oral pain (see earlier section: Oral cases for more details)
ZELDA (ITAJU 2033) was sedated for a full examination on the 3rd of August of 2024 due to ongoing lethargy, anorexia, vomit distention of the abdomen and no improvement after diagnosis/treatment for FIP. X-rays revealed that due to stasis caused by FIP, a bone had become lodged at the entrance to the pylorus and had to be surgically removed. Treatment with meloxicam for pain relief was commenced and to aid post-surgical recovery, a broad-spectrum antibiotic (amoxicillin/clavulanic acid). Zelda showed significant improvement after bone removal but still had some instability -lack of proper balance- due to the neuro FIP which resolved after 8 days of SQ injection with GS-44. External sutures were removed while conscious with no issues and hospitalization was completed after 17 days post-surgery. Wounds from surgery looked good, clean, no signs of infection, normal motility and faecals score 3. Continued with FIP monitoring showing satisfactory results after GS-44 treatment.

LEO (ITAJU 1928) had a history of chronic diarrhoea and abnormal increase in liver enzymes (AST and ALT), so a decision was made to anesthetize him to take images and perform ultrasound; due to reactive temperament, not possible to do it consciously. The Bush cat team brought Leo to the clinic on the 28th of September where he was anesthetized. During the procedure, he experienced episodes of apnea, which were controlled with emergency intubation. After stabilizing him, X-rays and an ultrasound were done. No major issues were found, although there was food content in his stomach and intestines from eating the day before. A liver aspiration was performed, and the liver cells appeared normal.

It was decided to treat him for inflammatory bowel disease (IBD), while still considering the possibility that a virus (like coronavirus) might be involved. He received treatment with antibiotics (amoxiclav + metronidazole), prednisolone, omeprazole, vitamins, and other supplements.

Despite some post-anesthesia stress, Leo recovered well, eating normally and showing activity the next morning.

MILO - LEOPARD- (SOPPA 0093) underwent a diagnostic procedure on the 8th of October due to clinical signs of dehydration, two episodes of bile vomiting, and QAR status. Anesthesia was achieved using a combination of Ketamine, Midazolam, Medetomidine, and Butorphanol. Although induction was smooth, a supplemental dose of Ketamine was required. Attempts to establish IV access were unsuccessful due to severe dehydration and fragile veins; subcutaneous fluids were administered instead. The procedure included blood sampling, radiographs, and an abdominal ultrasound. Recovery was uneventful.

Laboratory results revealed significant leukocytosis (WBC: $39.97 \times 10^9$/L; NEU: $35.7 \times 10^9$/L) and elevated CK (2400 U/L), likely influenced by multiple injections. Radiographs showed moderate gastric fluid accumulation with pinpoint air pockets in the pyloric wall but no evidence of obstruction or free abdominal air or fluid. Ultrasound confirmed focal thickening

of the gastric mucosa (>1 cm, normal 3–4 mm) with loss of normal wall layering, hyperechoic gas pockets, and a consistent, immobile, hyperechoic soft tissue area (2x3 cm).

These findings suggested focal gastric wall thickening potentially caused by ulceration, inflammation, or a gastric mass (e.g., granuloma, abscess, or neoplasia). A foreign body couldn't be ruled out despite no obstruction observed.

Treatment was given with gastric protectants, analgesics and antibiotics and he was monitored to see if there was any improvement.

MILO - LEOPARD- (SOPPA 0093) last anesthesia on the 8th of October, radiographs and an ultrasound revealed severe gastric wall thickening, adhesions, and a suspected 3x3 cm gastric lesion potentially indicative of a mass, ulcer, or granuloma. Supportive care, including hydration, anti-inflammatory, and anti-nausea medications, was initiated. Bloodwork confirmed severe inflammation and potential bacterial infection. Milo recovered from anesthesia but continued to exhibit lethargy and anorexia.

On October 10th, a second anesthesia was performed for exploratory laparotomy and gastrotomy. The stomach was enlarged and severely congested, with chronic inflammation resulting in fibrosis affecting 50% of the mucosa. Multiple adhesions and gas bubbles were identified, and two small ulcers were observed within the thickened gastric folds. Surgical removal of the lesions was deemed infeasible due to the extent of fibrosis. Medications to coat the stomach and a treatment plan including H2 blockers, antibiotics, and pain management were initiated.

While recovering from anesthesia, Milo experienced respiratory arrest. Despite prolonged assisted respiration, CPR, and administration of stimulatory drugs (Doxapram, adrenaline, and atropine), efforts to resuscitate were unsuccessful. Milo was pronounced deceased at 12:48 PM.

**Necropsy Findings:**

- **Heart:** Normal structure with ventricular wall thickening and no abnormal fluid.
- **Lungs:** Congested with bruising, consistent with cardiorespiratory arrest.
- **Abdominal Cavity:** Extensive adhesions throughout.
- **Stomach:** Severe congestion, 40% fibrosis, and bacterial infiltration consistent with chronic gastritis. Early-stage ulcers were noted within thickened gastric folds.
- **Other Organs (Small intestine, pancreas, liver, kidneys, spleen):** No significant findings (NSF).

**Presumptive Diagnosis:** Chronic asymptomatic gastritis with secondary bacterial infection, gastric fibrosis, and adhesions. Pathological changes in the stomach likely contributed to systemic inflammation and complications.

LEO (ITAJU 1928) In November 2024, he was observed to be inappetence, an unusual behavior given his typically high food drive. A distended stomach was noted, raising suspicion of fluid accumulation due to a lack of response to treatment with GS-44. Initial X-rays were performed in his enclosure, but due to excessive sunlight and his lack of appetite, the images

were unclear. As a result, anesthesia was administered to transport him to the clinic for further examination. Administered GABA to calm him before anesthesia. During exams, it was discovered abdominal inflammation instead of liquid, as initially suspected. Ultrasound confirmed no fluid in the abdominal cavity, so no drainage was performed.

A new finding showed thickened pyloric antrum walls in the stomach, and some intestinal inflammation, but no signs of obstruction, foreign bodies, or ulcers. X-rays revealed no obstruction, only gas and feces in the colon. Bloodwork showed improvements, with ALT within normal range for the first time and a slight increase in Na+ (taken pre-fluids).

Suspected an IBD flare-up post-treatment and administered dexamethasone, famotidine, IV+SC fluids, Cerenia, GS44, and metoclopramide. Anesthesia went smoother than in September, with no breathing emergencies. By 4:30 PM, he ate 150g of baby food and tolerated it well. His diet gradually increased as his stomach was stabilizing.

ABDI (ITAJU 2125) exhibited unusual behavior on December 17th of 2024, avoiding feeding and interaction while appearing slow and with slow food drive. Bloodwork revealed abnormalities consistent with suspected FIP, including decreased WBC (5.26), elevated neutrophils (88%), low lymphocytes (6.3%), and undetectable eosinophils. Biochemical findings showed high total protein (TP: 88.7), elevated globulins (GLO: 58.1), a low albumin/globulin ratio (A/G: 0.5), low ALT (3), and high bilirubin (TBIL: 14.89).

The following day, Abdi's condition worsened, with no food drive and a distended abdomen suggesting fluid accumulation. Anesthesia was performed for a diagnostic workup, revealing a small amount of abdominal fluid and liver enlargement. Ultrasound-guided sampling of the fluid showed it to be dense, yellow, and positive for FIP using the Rivalta test.

Treatment included subcutaneous GS-44, hydration, and Cerenia. Abdi recovered well post-anesthesia, eating a small amount of food and drinking water by the evening. Continued monitoring and recovered well after treatment with GS-44.

LEO (ITAJU 1928) was found very lethargic on the 20th of December: shaking, inappetent, and unwilling to move. He appeared cold, and despite being given time to warm up, his condition did not improve. He continued shaking, refused medication and food, passed liquid feces, and moved uncomfortably before lying down in apparent distress. His eyes were squinting with protruding eyelids, liquid fecal residue was observed on his back, and a draining facial abscess emitted a foul odor, indicating a poor overall condition.

The decision was made to anesthetize Leo and bring him to the clinic for further evaluation. Radiographs revealed food and gas in the stomach, consistent with intestinal stasis, but no signs of free fluid. The liver and kidneys appeared normal and were in their correct anatomical positions. The facial abscess was extensive (see earlier section: Oral cases for more details), almost connecting to the nostril. It was thoroughly debrided, flushed, and treated. Blood tests showed evidence of kidney damage, including elevated BUN (23.7, norm: 3.6–10.7), creatinine (281, norm: 27–141), CK (912, norm: 50–450), and glucose (10.74, norm: 3.9–8.3), along with an increase in ALT. Urinalysis revealed high protein levels (++++) and a significant presence of leukocytes, trace non-hemolyzed blood, specific gravity of 1.030, and trace ketones.

Leo was treated with Convenia (SQ), Metronidazole (IV), Cerenia (SQ), Dexamethasone (IM), Kyroligo (IM), Omeprazole (IV), and Tramadol (IV). His condition was suspected to be due to a combination of factors, including an acute urinary infection, likely secondary to the facial abscess and compromised immune response. However, the possibility of two separate conditions could not be excluded.

Leo remained hospitalized in the clinic for three days and responded positively to treatment, including antibiotics and pain management. He was discharged and returned to his enclosure on December 23rd to continue the prescribed treatment regimen.

VENUS (ITAJU 2037) initially presented with non-weight-bearing lameness on the left front limb, with palpation localizing the issue to the foot. X-rays revealed soft tissue swelling in the mid radial/ulnar region with no bone involvement. Small air pockets were noted in the soft tissues of the distal aspect of the third toe. Two days later, an abscess developed, and from December 11th to December 24th, wound care and debridement were performed during behavioral restraint within her enclosure.

On December 24th, Venus was brought to the clinic for debridement under anesthesia because she remained limping and the wound appeared dirty. Upon closer examination, maggots were discovered inside the wound. Under anesthesia, the wound was deep-cleaned, maggots removed, dead tissue debrided, and the area flushed and scrubbed. A gauze with silver sulfadiazine was applied, and the wound was wrapped and protected with a sock.

Given the size and location of the abscess, it was suspected that the injury had been caused by a snake or scorpion bite, which likely resulted in localized necrosis and a subsequent pseudomonas infection. Treatment included oral antibiotics targeting pseudomonas with ciprofloxacin and azithromycin, as well as topical antibiotics applied directly to the lesion.

While recovering from anesthesia, Venus ingested a piece of the sock measuring approximately 5x6 cm. She was monitored overnight and showed improvement the following morning, although gabapentin was required due to post-anesthetic disorientation. By midday, the bandage was removed, revealing a cleaner wound with minor bleeding but no swelling.

Venus was placed on paraffin and lactulose to facilitate the passage of the ingested fabric. On the night of the 27th, she passed a large piece of fabric/sock in her feces. As of today, she remains bright, alert, and responsive (BAR), with no signs of abdominal pain, vomiting, or reduced food drive.

The wound on the paw, though large and exposed, shows no progression of necrosis and continues to improve with twice-daily cleaning.

**Table 53: Common combinations of anaesthetic agents used for procedures requiring sedation:**

| | | |
|---|---|---|
| ***Alpha-2 agonist***<br>Dexmedetomidine or Medetomidine | | ***NMDA antagonist***<br>Ketamine |
| **PLUS** | **PLUS, EITHER ONE OF** | **OR** |
| ***Opioid***<br>Butorphanol | | ***Benzodiazepine***<br>Midazolam |

Propofol was administered IV as needed, to maintain a good anaesthetic plane during sedation for short procedures where General Anaesthesia (GA) was not indicated; it was also used to induce a deeper anaesthetic plane in cases where the decision was made to proceed to a GA.

Cases requiring General Anaesthesia were maintained on inhalant anaesthesia via endotracheal tube (isoflurane and oxygen mixture).

Reversal agents used included atipamezole for reversal of alpha-2 agonists, and flumazenil for reversal of benzodiazepines.

## Deaths, Euthanasia, and Necropsies

Between Jan to Dec 2024, the CCF population suffered 1 death (Leopard SOPPA 0093) associated with chronic gastrointestinal issues and 2 deaths associated with development of neurological symptoms: 2 siblings Aamiina 1.0 (ITAJU 2128) and Miss Behave 0.1 (ITAJU 2129). A table summarising these cases is found below.

Table 54: Summary of deaths that occurred in the resident population during 2024

| Animal name and details | Case details |
|---|---|
| AAMIINA<br>(ITAJU 2128)<br>Male<br>0y 8m at time of death | **Date of birth (approx.):** 18-Sep-2023 (+/- 2 weeks)<br>**Confiscation date:** 17-Oct-2023<br>**Date of death:** 29-Apr-2024<br>**History at time of death:** Neurological signs that progressed throughout April: seizures, ataxia, reduced appetite, depressed demeanour, generalised weakness and forelimb paresis.<br>**Cause of death:** A large seizure rendered Miin unconscious, and he then entered multiple cardiorespiratory arrests over the subsequent 6 hours. Resuscitated on 4 occasions with CPR and intracardiac adrenaline, however remained non-responsive. Entered a final arrest, no response to resuscitation attempt.<br>**Significant necropsy findings:**<br>Small haemorrhages on heart surface - attributable to intracardiac adrenaline injections during resus. Right lung - 2 areas of superficial haemorrhage (1 on cranial lobe, 1 on caudal lobe). Stomach full of undigested food. The small intestine contained gas and liquid digesta, the large intestine contained soft faecal matter and had a darker superficial appearance. Liver and kidneys appeared enlarged externally, unremarkable internally. Brain unremarkable, not friable on removal for fixation. |
| MISS BEHAVE<br>(ITAJU 2129)<br>Female | **Date of birth (approx.):** 18-Sep-2023 (+/- 2 weeks)<br>**Confiscation date:** 17-Oct-2023<br>**Date of death:** 16-May-2024 |

| | |
|---|---|
| 0y 8m at time of death | **History at time of death:** Neurological signs that progressed throughout May, manifesting primarily as pelvic ataxia, depressed demeanour, generalised paresis.<br><br>**Cause of death:** Stopped breathing at 01:55 on 16-May-2024, non-responsive to attempted resuscitation by CPR and intracardiac adrenaline. Declared deceased.<br><br>**Significant necropsy findings:**<br><br>Small amount of fluid in pericardial sac, auricle dark in appearance, clotted blood both atria. Lungs – superficial haemorrhage (1 on cranial lobe RIGHT lung, 1 on left lung). Minimal free fluid in thorax and in abdomen. Stomach full of partially digested food (mince). Mesenteric and colonic lymph nodes enlarged. Spleen and kidneys appeared enlarged externally, kidneys discoloured internally. Brain unremarkable, not friable on removal for fixation. Left femoral head absent. |
| MILO -LEOPARD-<br><br>(SOPPA0093)<br><br>Male<br><br>4y 4m at time of death | **Date of birth (approx.):** 01-Jun-2020 (+/- 2 weeks)<br><br>**Confiscation date: 15-Aug-2020**<br><br>**Date of death:** 10-Oct-2024<br><br>**History at time of death:** History of "episodes" since 2022 in which he stops eating and moving normally due to unknown reasons. Has had complete workout + ultrasounds + x rays with no conclusive diagnosis due to no abnormal changes or signs of pathology. From the last week of September he had another episode with primary symptoms of inappetence, lethargy, dehydration and vomiting..<br><br>**Cause of death: Went into cardio respiratory arrest after gastrotomy surgery. Stopped b**reathing at 11:33 on 10-Oct-2024, non-responsive to attempted resuscitation by CPR and intracardiac adrenaline. Declared deceased.<br><br>**Significant necropsy findings:**<br><br>Heart; Surrounded by fat. Epicardium was clean with no abnormal liquid. Heart with normal shape but engrossed walls on the ventricles. Valves normal.<br><br>Stomach; Attached to the wall by numerous adhesions. Extremely congested with very engrossed walls. Evidence of bacterial formation inside the mucous membrane. Fibrosis present in 40% of the stomach consistent with chronic inflammation. Signs of early stages of two 1x1 ulcers hidden on the engrossed folds of the stomach.<br><br>Bladder; With adhesions to the abdomen<br><br>Presumptive dx: Chronic asymptomatic gastritis Adhesions in the digestive system along with abnormal and pathological changes in the stomach are consistent with a chronic form of gastritis that possibly after time, it became infectious causing elevated white blood cells, gas in the stomach, congestion, discomfort, dehydration, vomits, weakness and pain. |

## New non-cheetah residents

Falco (IT-FAL0001)

- Species: Lanner falcon *(Falco biarmicus)*
- Date of Admission: September 11, 2024
- Source: Ministry of Environment, Somaliland
- Background: Unknown, found abandoned

Medical Assessment:

- Physical examination and X-rays revealed a healed fracture of the right wing humerus, dehydration, and malnutrition.
- The fracture was already consolidated, making surgical or physical stabilization impossible.

Behavioral Notes:

- Displays unusual behavior for a wild animal, suspected to be a pet before found: little fear of humans, accepts offered food from feeding tongs, and allows close human interaction.

Treatment:

- Initially hospitalized in Clinic Room 8 to address dehydration and malnutrition.
- Once stable, translocated to a larger enclosure (Y4) on October 15, 2024. The new environment improved movement, comfort, and overall welfare.

Diet:

- 60g goat meat with predator powder, twice daily (10:00 AM and 4:30 PM).

Current Status:

- Stable.

## Butchery/Carcass processing inspections

Butchery and carcass inspection occurs once weekly, typically on a Monday. Inspections of the carcasses and internal organs are performed by the veterinarians, to ensure the meat and organs fed to the residents are of satisfactory quality, and also to assess for ongoing disease processes to prevent transmission and zoonotic risk to both the resident animals and human staff. The majority of the carcasses and organs are considered healthy and safe for animal consumption. Organs, meat, or carcasses that pose a threat of illness or disease transmission are discarded.

The most common pathological findings in goat carcasses in 2024 to date were:

- Caseous lymphadenitis
- Abscesses or discharge in the lungs / liver / muscle / thoracic or abdominal cavities
- Parasitic cysts in lungs, liver, kidneys, diaphragm, heart
- Black/metallic discolouration of renal medulla
- Enlarged lymph nodes

Special attention is assigned to the thorax and lungs, given the zoonotic risk of tuberculosis and brucellosis. Carcasses found with lesions that lend to suspicion of these diseases are discarded. Between Jan to Dec 2024, on average 9 goat carcasses were disposed of every butchery due to presence of generalised abscesses or other abnormalities that deemed the carcasses unfit to eat.

Due to several electrical problems in Geed Deeble, we have lost a significant number of carcasses when they did not freeze, or they were without refrigeration for too long – this increased the production of bacteria, causing changes of discoloration, rotting conditions with a strong smell of food not suitable for consumption. Most of the power issues have been addressed but we still have some sporadically.

Since 2023, the walk-in freezer at the meat room has been experiencing reliability issues. A stable freezer temperature is not maintained, due to the freezer shutting off multiple times during the course of the day. The result is meat that experiences large temperature fluctuations and ultimately does not freeze. To minimise carcass losses, meat is stored in the small freezers and only enrichment bones are stored in the walk-in freezer. However, the temperature regulation issues have also led to frequent disposal of enrichment bones, due to development of malodour, mould, and bacteria.

# Appendix

Table 55: List of the current resident population, 31 Dec 2024

| | ITAJU | Name | Gender | Location | Birth date | Microchip # | Confiscation date |
|---|---|---|---|---|---|---|---|
| **1** | 2125 | Abdi | M | E4 | 15-Oct-2022 | 992003000381840 | 3-Feb-2023 |
| **2** | 2082 | Absame | M | E15 | 25-Jan-2022 | 956000012180977 | 01-Mar-2022 |
| **3** | 2043 | Amaterasu | F | E2 | 16-Aug-2021 | 956000012205207 | 6-Sep-2021 |
| **4** | 2027 | Amiin | M | E5 | 1-May-2020 | 956000012181633 | 23-Sep-2020 |
| **5** | 2028 | Amiir | M | E5 | 1-May-2020 | 956000012205329 | 23-Sep-2020 |
| **6** | 1938 | Andromeda | F | E8 | 1-Feb-2019 | 953010003494644 | 6-Sep-2019 |
| **7** | 2007 | Astur | M | E11 | 1-Feb-2020 | 953010004073864 | 15-Aug-2020 |
| **8** | 2012 | Ayaan | F | E1 | 1-Jul-2020 | 956000012205256 | 14-Sep-2020 |
| **9** | 2041 | Azaar | M | E7 | 16-Aug-2021 | 956000012205186 | 6-Sep-2021 |
| **10** | 2094 | Badia | F | E9 | 12-Dec-2021 | 992003000143058 | 12-Mar-2022 |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| **11** | 1981 | Bagheer | M | E11 | 1-Jan-2020 | 953010004073806 | 31-Jan-2020 |
| **12** | 2072 | Bashir | M | E7 | 19-Sep-2021 | 992003000143023 | 12-Dec-2021 |
| **13** | 2093 | Basimah | F | E9 | 12-Dec-2021 | 956000012205709 | 12-Mar-2022 |
| **14** | 2087 | Betty White | F | E9 | 01-Dec-2021 | 992003000143029 | 01-Mar-2022 |
| **15** | 2069 | Bilane | M | E6 | 7-Sep-2021 | 956000012181934 | 12-Oct-2021 |
| **16** | 2073 | Bishaaro | F | E2 | 19-Sep-2021 | 956000012205579 | 12-Dec-2021 |
| **17** | 2045 | Boqor | M | E6 | 20-Aug-2021 | 956000012205710 | 4-Oct-2021 |
| **18** | 2135 | Buzz | M | Clinic Y2 | 25-Aug-2023 | 992003000143037 | 25-Dec-2023 |
| **19** | 2089 | Calla | F | E9 | 01-Oct-2021 | 992003000381841 | 01-Mar-2022 |
| **20** | 2097 | Charley | M | E15 | 28-Mar-2022 | 992003000142977 | 19-Apr-2022 |
| **21** | 1836 | Cloud | F | EM/C | 4-Mar-2018 | 953010003504307 | 4-Aug-2018 |
| **22** | 1980 | CZ | M | E11 | 1-Jan-2020 | 953010004073778 | 31-Jan-2020 |
| **23** | 2086 | Dahab | F | E9 | 01-Nov-2021 | 992003000143051 | 01-Mar-2022 |
| **24** | 1984 | Darth | M | E11 | 1-Feb-2020 | 953010004073769 | 18-April-2020 |
| **25** | 2047 | Delphina | F | E2 | 20-Aug-2021 | 956000012205387 | 4-Oct-2021 |
| **26** | 2110 | Delta | F | E9 | 28-Mar-2022 | 992003000142974 | 19-Apr-2022 |
| **27** | 2046 | Dhiirin | F | E2 | 20-Aug-2021 | 956000012204860 | 4-Oct-2021 |
| **28** | 1949 | DJ | M | E14 | 1-Aug-2019 | 941000016884981 | 4-Oct-2019 |
| **29** | 1939 | Duma | M | E3 | 1-Jul-2019 | 953010003494354 | 6-Sep-2019 |
| **30** | 1962 | Emmet | M | E14 | 1-Sep-2019 | 981020023220871 | 18-Oct-2019 |
| **31** | 1958 | Faduma | F | E10 | 1-Aug-2019 | 981020023210942 | 18-Oct-2019 |
| **32** | IT-FAL0001 | Falco | M | Y4 | 11 Oct 2023 | NAD | 11-Sept-2024 |
| **33** | 2122 | Faysa | F | EJa | 19-Sept-2022 | 992003000143028 | 8-Nov-2022 |
| **34** | 1998 | Frigga | M | E13 | 1-May-2020 | 992003000381846 | 24-Jul-2020 |
| **35** | 2098 | Gamma | M | E15 | 19-Dec-2021 | 992003000143050 | 19-Apr-2022 |
| **36** | 2070 | Gashaan | M | E6 | 7-Sep-2021 | 956000012181620 | 12-Oct-2021 |
| **37** | 2113 | Hakim | M | E15 | 1-Jan-2022 | 992003000142979 | 13-May-2022 |
| **38** | 2099 | Halo | M | E15 | 19-Dec-2021 | 992003000381845 | 31-Jul-2022 |
| **39** | 2084 | Hani | F | E9 | 01-Feb-2022 | 956000012205350 | 01-Mar-2022 |
| **40** | 2011 | Hanuman | M | E1.5 | 1-Jan-2020 | 956000012205763 | 14-Sep-2020 |
| **41** | 2126 | Hasani | M | E4 | 1-Oct-2022 | 992003000143026 | 3-Feb-2023 |
| **42** | 2116 | Hatari | M | E15 | 10-Jun-2022 | 992003000142975 | 20-Apr-2022 |
| **43** | IT-CCA0019 | Honey | F | Milo E | 24-Aug-2022 | 992003000142973 | 28-Sep-2022 |
| **44** | 2091 | Idil | F | E9 | 01-Oct-2021 | 992003000143030 | 01-Mar-2022 |
| **45** | 2008 | Idris | M | E5 | 1-Jul-2020 | 953010004073273 | 22-Aug-2020 |
| **46** | 2068 | Jabari | M | E6 | 7-Sep-2021 | 956000012205636 | 12-Oct-2021 |
| **47** | 1950 | Janet | F | E10 | 1-Aug-2019 | 941000016884268 | 4-Oct-2019 |
| **48** | 2121 | Jasiri | F | EJa | 31-Aug-2022 | 992003000381844 | 16-Oct-2022 |
| **49** | 2120 | John Cheeto | M | E4 | 31-Aug-2022 | 992003000142971 | 16-Oct-2022 |
| **50** | 1944 | Johnny | M | E13 | 1-Jul-2019 | 981020023212750 | 10-Sep-2020 |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| **51** | 2076 | Kaise | M | E7 | 23-Nov-2021 | 956000012205400 | 20-Jan-2022 |
| **52** | 2005 | Kariir | F | E10 | 1-Jan-2020 | 953010004073927 | 05-Aug-2020 |
| **53** | 1930 | Kurro | F | E8 | 1-Dec-2018 | 953010003493103 | 6-Sep-2019 |
| **54** | 1928 | Leo | M | E3 | 1-Jan-2019 | 953010003504274 | 19-Feb-2019 |
| **55** | 2088 | Leylo | F | E9 | 01-Nov-2021 | 992003000381848 | 01-Mar-2022 |
| **56** | 2048 | LH | M | E6 | 16-Aug-2021 | 956000012204927 | 10-Oct-2021 |
| **57** | 1926 | Libbo | F | E8 | 1-Dec-2018 | 953010003504265 | 19-Feb-2018 |
| **58** | 2127 | Lily | F | EJa | 11-Nov-2022 | 992003000143022 | 11-Apr-2023 |
| **59** | 2032 | Link | M | E5 | 1-Aug-2020 | 956000012207957 | 17-Oct-2020 |
| **60** | 1838 | Little Star | F | E8 | 1-Apr-2018 | 953010003494423 | 5-Sep-2019 |
| **61** | 2083 | Lorenzo | M | E7 | 01-Oct-2021 | 992003000143055 | 01-Mar-2022 |
| **62** | 2138 | Madar | M | Cub Room 1 | 15-Jan-2024 | 992003000143032 | 20-May-2024 |
| **63** | 1996 | Major | M | E12 | 1-Jul-2020 | 953010004073362 | 18-Jul-2020 |
| **64** | 1964 | Margarita | F | E10 | 1-Aug-2019 | 981020023220320 | 18-Oct-2019 |
| **65** | 2034 | Mars | M | E5 | 1-Jun-2020 | 956000012205415 | 17-Oct-2020 |
| **66** | 1960 | Meeko | M | E14 | 1-Oct-2019 | 981020023234354 | 18-Oct-2019 |
| **67** | 2134 | Mercury | M | Clinic Y2 | 25-Aug-2023 | 992003000143038 | 25-Dec-2023 |
| **68** | 1945 | Mickey | M | E13 | 1-Jul-2019 | 941000016884985 | 10-Sep-2020 |
| **69** | 1837 | Mist | F | EM/C | 18-Mar-2018 | 953010003494497 | 4-Aug-2018 |
| **70** | 1839 | Moonlight | F | E8 | 1-Apr-2018 | 953010003494590 | 10-Sep-2020 |
| **71** | 2090 | Myza | F | E9 | 01-Nov-2021 | 992003000143057 | 01-Mar-2022 |
| **72** | 2071 | Nasiib | M | E7 | 8-Jun-2021 | 956000012181057 | 8-Nov-2021 |
| **73** | 2119 | Newton | M | E4 | 30-Jun-2022 | 992003000142972 | 16-Oct-2022 |
| **74** | 2124 | Oklahoma | M | E4 | 15-Oct-2022 | 992003000143024 | 3-Feb-2023 |
| **75** | 2044 | Pacha | F | E2 | 16-Aug-2021 | 956000012205524 | 6-Sep-2021 |
| **76** | 2035 | Pluto | M | E5 | 1-Jun-2020 | 956000012205246 | 17-Oct-2020 |
| **77** | 1961 | Rajo | M | E14 | 1-Oct-2019 | 981020023200324 | 18-Oct-2019 |
| **78** | 2136 | Rama | M | Cub Room 3 | 4-Feb-2024 | 992003000143031 | 31-Mar-2024 |
| **79** | 2133 | Riks | M | Clinic Y2 | 25-Aug-2023 | 992003000143039 | 25-Dec-2023 |
| **80** | 2115 | Ruhi | F | E9 | 1-Jan-2022 | 992003000142976 | 13-May-2022 |
| **81** | 2049 | Sahmiye | M | E7 | 8-Jun-2021 | 956000012205800 | 8-Nov-2021 |
| **82** | 2075 | Salim | M | E7 | 15-Jul-2021 | 956000012205780 | 13-Jan-2022 |
| **83** | 2031 | San | F | E1 | 1-Aug-2020 | 956000012181095 | 17-Oct-2020 |
| **84** | 2074 | Sanu | F | E2 | 4-Oct-2021 | 956000012180826 | 3-Jan-2022 |
| **85** | 1997 | Serge | M | E12 | 1-Jul-2020 | 953010004073360 | 18-Jul-2020 |
| **86** | 2000 | Shamsi | M | E11 | 1-Nov-2019 | 953010004073852 | 29-Jul-2020 |
| **87** | 2123 | Shukri | F | EJa | 22-Aug-2022 | 992003000143027 | 22-Nov-2022 |
| **88** | 2001 | Sif | F | E10 | 1-Dec-2019 | 981020023219624 | 05-Aug-2020 |
| **89** | 2002 | Sol | F | E10 | 1-Dec-2019 | 981020023225174 | 05-Aug-2020 |
| **90** | 1935 | Storm | M | E3 | 1-Sep-2018 | 953010003493788 | 6-Sep-2019 |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| **91** | 2131 | Sunny-Joe | M | Clinic Y2 | 13-Aug-2023 | 992003000143021 | 13-Dec-2023 |
| **92** | 2015 | Teresa | F | E1 | 1-May-2020 | 953010004073282 | 19-Sep-2020 |
| **93** | 2132 | Turo | M | Clinic Y2 | 13-Aug-2023 | 992003000143020 | 13-Dec-2023 |
| **94** | 2037 | Venus | F | E1 | 1-Jun-2020 | 956000012204859 | 17-Oct-2020 |
| **95** | 1995 | Vicki 2 | F | E1 | 1-Jul-2020 | 953010004073276 | 18-Jul-2020 |
| **96** | 2042 | Yaku | M | E7 | 16-Aug-2021 | 956000012205032 | 6-Sep-2021 |
| **97** | 2033 | Zelda | F | E1 | 1-Aug-2020 | 956000012205670 | 17-Oct-2020 |
| **98** | 1994 | Zero | F | E1 | 1-Jul-2020 | 953010004073274 | 18-Jul-2020 |

### Table 56: List of confiscations / new arrivals, 01 Jan 2024 to 31 Dec 2024

| Confiscation date | ITAJU | Name | Gender | Approx. age on arrival (weeks) | Health status and notes at intake |
|---|---|---|---|---|---|
| 31-Mar-2024 | 2136 | Rama | M | 8 | Physical status: good<br>Demeanour: Bright, alert, inquisitive<br>Weight on arrival: 1.26 kg<br>Body condition Score: 4 out of 9<br>Hydration status: Good, no dehydration |
| 20-May-2024 | 2138 | Madar | M | 20 (+/- 2 weeks) | Physical status: fair<br>Demeanour: Bright, alert, inquisitive<br>Weight on arrival: 6.1 kg<br>Body condition Score: 3 out of 9<br>Hydration status: Mild 5-7% dehydration |

### Table 57: List of animals deceased, 01 Jan 2024 to 31 Dec 2024

| # | ITAJU | Name | Gender | Date of birth | Date of death | Microchip # | Confiscation date |
|---|---|---|---|---|---|---|---|
| **1** | 2128 | Aamiina | M | 18-Sep-2023 | 29-Apr-2024 | 992003000381847 | 17-Oct-2023 |
| **2** | 2129 | Miss Behave | F | 18-Sep-2023 | 16-May-2024 | 992003000381843 | 17-Oct-2023 |
| **3** | SOPPA-0093 | Milo | M | 15-July-2020 | 10-Oct-2024 | 953010004073792 | 18-Jul-2020 |

# V. Education Programs

Public education and the development of an active grassroots constituency are integral components of CCF's overall cheetah conservation programmes. CCF educates farmers, students, educators, public-policy makers, and the public in general on the value of sustainable practices in conservation, as well as on the importance and value of predators for a healthy ecosystem. Public education and the development of national pride in the cheetah are both critical to its survival, and other natural resources in Namibia. CCF's Education Department welcomed Joe-Brown Kambombo as an Education Technician.

## A. Future Conservationists of Africa

During this reporting period, CCF's Education department engaged **23,295** Namibian students from primary and secondary school levels, as well as **624** teachers in both its outreach and center-based programs.

### A.1 Outreach Programs

The outreach programs are tailor made for specific audiences and run for approximately 45 minutes covering CCF's research, conservation, and education efforts. They also cover cheetah behavior, ecology, and its conservation. The presentations and talks go further into different predator ID's, rangeland management, biodiversity as well as Human Wildlife Conflict mitigation strategies, collaborative management tools to sustainably live with wildlife, and the economic and environmental benefits of having healthy, and balanced ecosystems. The Education Department visited 71 schools during this reporting period, reaching a total of **22,425** students and **493** teachers (Table 40).

*Table 58: Namibian schools who were reached with CCF's school outreach program, January to December 2024.*

| Date | Namibian School Outreach Groups | Students | Adults | Total |
|---|---|---|---|---|
| 25 January | Orwetoveni Primary School | 640 | 5 | 645 |
| 25 January | Edugate Academy | 82 | 3 | 85 |
| 25 January | Spesbona Primary School | 176 | 4 | 180 |
| 26 January | Karundu Primary School | 220 | 6 | 226 |
| 26 January | Karundu Junior Secondary School | 900 | 8 | 908 |
| 26 January | Orwetoveni Project School | 90 | 3 | 93 |

| | | | | |
|---|---|---|---|---|
| 26 January | Spesbona Primary School | 180 | 5 | 185 |
| 26 January | Paresis Secondary School | 52 | 3 | 55 |
| 6 February | Otavi Primary School | 620 | 6 | 626 |
| 6 February | Kombat Combined School | 950 | 8 | 958 |
| 7 February | St Isidor RC Primary School | 149 | 4 | 153 |
| 7 February | Kalenga Primary School | 400 | 7 | 407 |
| 8 February | Makalani Primary School | 360 | 4 | 364 |
| 9 February | Omulunga Primary School | 698 | 9 | 707 |
| 9 February | Luiperdheuwel Primary School | 277 | 5 | 282 |
| 20 February | Waterberg Junior Secondary School | 179 | 4 | 183 |
| 20 February | Ludwig Ndinda Primary School | 500 | 8 | 508 |
| 21 February | Okamatapati Combined School | 77 | 3 | 80 |
| 21 February | Coblenz Combined School | 70 | 4 | 74 |
| 22 February | Otjozondu Primary School | 245 | 7 | 252 |
| 22 February | Okondjatu Combined School | 750 | 6 | 756 |
| 14 March | Otjiperongo Secondary School | 370 | 8 | 378 |
| 14 March | Otjohorongo Primary School | 221 | 4 | 225 |
| 14 March | Okongue Primary School | 210 | 3 | 213 |
| 15 March | Gaob Justus Garoeb High School | 70 | 8 | 78 |

| | | | | |
|---|---|---|---|---|
| 15 March | Martin Luther Secondary School | 244 | 5 | 249 |
| 9 April | Ludwighaven Primary School | 135 | 4 | 139 |
| 9 April | Huigub Primary School | 193 | 5 | 198 |
| 9 April | Tsintsabis Primary School | 193 | 8 | 201 |
| 9 April | !Khomxa Khoeda Primary School | 222 | 6 | 228 |
| 10 April | Tsumeb English Medium School | 143 | 3 | 146 |
| 10 April | Tsumeb Senior Secondary School | 84 | 3 | 87 |
| 10 April | Francis Galton Primary School | 73 | 5 | 78 |
| 11 April | Etosha Secondary School | 82 | 10 | 92 |
| 11 April 24 | Ondundu Combined School | 184 | 6 | 190 |
| 11 April | Kuvukiland Primary School | 278 | 7 | 285 |
| 11 April | St Francis Primary School | 312 | 5 | 317 |
| 11 April | Tsumeb Gimmnasium Private | 75 | 6 | 81 |
| 24 April | Mount Etjo Private School | 36 | 3 | 39 |
| 24 April | Kalkfeld Primary School | 235 | 7 | 242 |
| 24 April | G.K Walh Combined School | 478 | 8 | 486 |
| 29 April | Delta Primary School | 820 | 12 | 832 |
| 29 April | Ella du Plessis High School | 1461 | 14 | 1475 |
| 29 April | Theo Katjimune Primary School | 352 | 9 | 361 |
| 29 April | Goreangab Jun Sec School | 42 | 2 | 44 |
| 29 April | Namibia Primary School | 650 | 9 | 659 |
| 29 April | St Barnabas Primary School | 495 | 7 | 502 |
| 29 April | Van Rhyn Primary School | 800 | 11 | 811 |
| 30 April | Eros Girls School | 300 | 9 | 309 |
| 30 April | Orban Primary School | 400 | 11 | 411 |
| 30 April | Herman Gmeiner Primary | 331 | 7 | 338 |
| 1 May | A Shipena Secondary School | 220 | 5 | 225 |
| 1 May | Augustineum Secondary School | 200 | 8 | 208 |

| | | | | |
|---|---|---|---|---|
| 2 May | Pionier Boys School | 512 | 15 | 527 |
| 2 May | Hearing Impaired School | 40 | 5 | 45 |
| 2 May | Namutuni Primary School | 1079 | 18 | 1097 |
| 2 May | Dagbreek Resource School | 60 | 7 | 67 |
| 2 May | Bethold Himumune Primary School | 260 | 9 | 269 |
| 2 May | Jacob Marengo Secondary School | 45 | 4 | 49 |
| 3 May | Mandume Primary School | 368 | 11 | 379 |
| 3 May | Tobias Hainyoko Primary | 400 | 13 | 413 |
| 22 May | Otijwarongo Christian School | 52 | 4 | 56 |
| 22 May | Paresis Sen Secondary School | 130 | 8 | 138 |
| 31 July | Karibib Private School | 146 | 6 | 152 |
| 31 July | Karibib Education Centre | 40 | 4 | 44 |
| 31 July | Ebebhaeser Primary School | 265 | 8 | 273 |
| 31 July | Karibib Jun Sec School | 172 | 6 | 178 |
| 01 Aug | Erongosig Primary | 187 | 7 | 194 |
| 01 Aug | Elifas #Goseb Primary | 215 | 10 | 225 |
| 02 Aug | Da-Palm Secondary School | 500 | 15 | 515 |
| 02 Aug | Otjimbingwe Primary School | 430 | 13 | 443 |
| **Total Namibian School Outreach Groups** | | **22 425** | **493** | **22 918** |

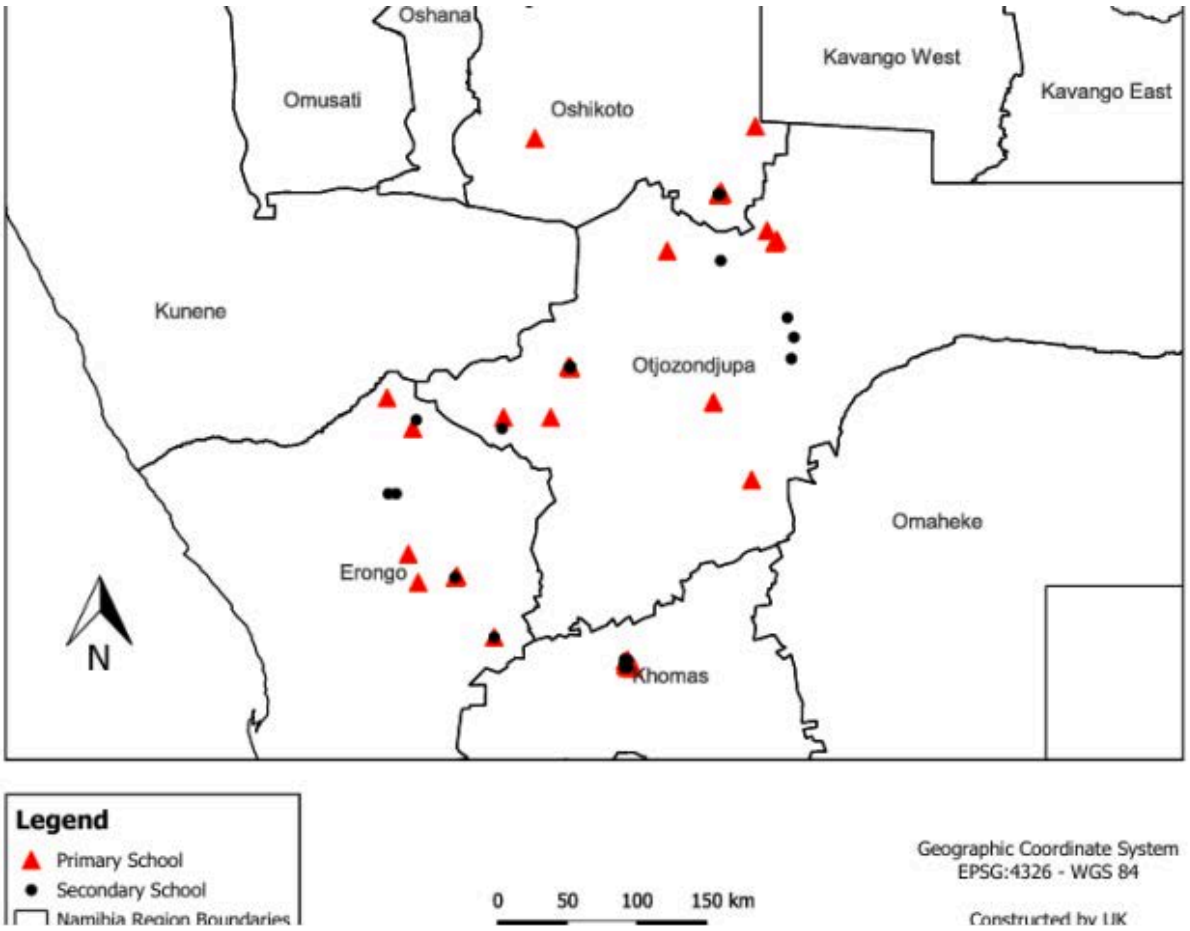


*Figure 78: school outreach during the reporting period*

During the reporting period, the education department visited 71 schools in four regions as shown on the map.

## A.2 Centre-based Programme

Organized education programmes at CCF during this reporting period involved Twenty five Namibian groups totaling 1,001 students and 131 teachers (Table 41 and Table 42). Sixteen school groups visited CCF for a day-length program, while one group of teachers participated in overnight-based programs.

Depending on the length of stay and the group focus, activities included cheetah runs, museum tours, guarding dog and goat kraal talks, predator-kill identification exercises, ecological talks, and game drives.

*Table 59: Namibian school groups participating in center-based programs at CCF, January to November 2024.*

| Date | School | Students | Adults | Total |
|---|---|---|---|---|
| 10 April 24 | Kids Club Otjiwarongo | 41 | 3 | 44 |
| 13 June 24 | Growing Tree Primary School | 26 | 4 | 30 |

| | | | | |
|---|---|---|---|---|
| 14 June 24 | Ruimte Primary School | 37 | 4 | 41 |
| 15 June 24 | Mothers Love Private School | 43 | 5 | 48 |
| 06 Sept 24 | Moses van/der byl Primary School | 27 | 5 | 32 |
| 07 Sept 24 | Cherish Christian School | 30 | 5 | 35 |
| 07 Sept 24 | Ngoma Primary School | 48 | 8 | 56 |
| 09 Sept 24 | Makalani Primary School | 75 | 7 | 82 |
| 09 Sept 24 | Opuwo Primary School | 43 | 6 | 49 |
| 11 Sept 24 | Eden Academy | 54 | 6 | 60 |
| 11 Sept 24 | Uvhungu-vhungu Secondary School | 12 | 5 | 17 |
| 17 Sept 24 | Edugate Academy | 27 | 4 | 31 |
| 17 Sept 24 | Jan Mohr Secondary School | 22 | 4 | 26 |
| 04 Oct 24 | Makalani Primary School | 75 | 7 | 82 |
| 25 Oct 24 | Johannes Shihepo Primary School | 34 | 9 | 43 |
| 04 Nov 24 | Haven Extra Classes | 21 | 2 | 23 |
| Total Day Visit | | 615 | 84 | 699 |

*Table: 60: Namibian School participating in overnight educational programs at CCF, January to November 2024.*

| Date In | Date Out | School | Students | Adults | Total |
|---|---|---|---|---|---|
| 04 Jun 24 | 05 Jun 24 | Homestead School (Teachers) | | 5 | 5 |
| 01 Aug | 03 Aug | Homestead Academy | | 3 | 3 |
| 15 Aug | 18 Aug | Homestead Academy | | 3 | 3 |
| 04 Sept 24 | 06 Sept 24 | Ubasen Primary School | 44 | 3 | 47 |
| 10 Sept 24 | 12 Sept 24 | Em Desh Private School | 70 | 8 | 78 |

| | | | | | |
|---|---|---|---|---|---|
| 12 Sept 24 | 14 Sept 24 | Dawid Bezuidenhout High School | 27 | 6 | 33 |
| 22 Sept 24 | 27 Sept 24 | Voortrekers | 40 | 7 | 47 |
| 27 Sept 24 | 21 Sept 24 | Ebenhaeser Primary School | 16 | 3 | 19 |
| 04 Oct 24 | 06 Oct 24 | Otjikondo Primary School | 23 | 4 | 27 |
| 02 Nov 24 | 03 Nov 24 | Bunnies Den Primary School | 35 | 5 | 40 |
| Total Overnight Namibian School Groups | | | 255 | 47 | 302 |

## A.3 Ambassador Animals

The Education Department continues to work with some of the kraal animals to serve as Ambassadors for the different school groups that visit CCF. Bolt, our eight-year-old breeding male dog continued his role as the Livestock Guarding Dog Programme Ambassador (Figure 68). By allowing children to meet Bolt and the other animals, the children can gain hands-on experience by touching a dog, and a livestock animal, which in many rural areas are not well taken care of or in which many children are not always taught how to take good care of. Interactive experiences have always left a big impact on children, and CCF's ambassador animals work well together to represent the farming and livestock management programme as they are comfortable with small children and big groups.

*Figure 79: Bolt meeting some of the young students during a school visit to CCF.*

## A.4 Camp Lightfoot

During this reporting period no new renovations were done at lightfoot camp.

## A.5 Higher Education and In-Service Training

CCF is committed to empowering Namibians in the conservation and protection of their wildlife. Toward this goal, for many years CCF has fostered Namibian college students' interest in wildlife conservation. CCF offers in-service training programs for students from the Namibia University of Science and Technology (NUST), Vocational Training Centers (VTC) and the University of Namibia (UNAM). These students conduct research projects with the goal of producing a research paper at the conclusion of their internships. Several former interns have gone on to work at conservation organizations or for MEFT.

In addition to the in-service training students, CCF welcomes groups from Namibia's higher-education institutions to participate in programs aimed at enriching their skills in various study areas. CCF did not host any overnight groups from Namibian tertiary institutions during this reporting period.

# B. Other Collaboration with Educational Institutions

During this reporting period, CCF Centre hosted nine international universities, from the USA and UK (Table 59). The groups participated in educational programs, including lectures on human-wildlife conflict, cheetah runs, and tours of CCF's Centre.

*Table 61: International universities participating in overnight centre-based programs at CCF, January to June 2024*

| *Date In* | *Date Out* | *School* | *Students* | *Adults* | *Total* |
|---|---|---|---|---|---|
| *15 Jan* | *17 Jan* | *Colby College – USA* | *14* | *4* | *18* |
| *17 Mar* | *19 Mar* | *University of New Hampshire - USA* | *26* | *4* | *30* |
| *27 Mar* | *28 Mar* | *Palmer Trinity College – USA* | *24* | *2* | *26* |
| *22 May* | *26 May* | *Messa Community College – USA* | *14* | *4* | *18* |
| *01 June* | *02 June* | *Xavier University – USA* | *13* | *3* | *16* |
| *08 June* | *09 June* | *University of Nebraska – USA* | *13* | *3* | *16* |
| *21 June* | *30 June* | *EarthExpedition Group A* | *13* | *3* | *16* |

| | | | | | |
|---|---|---|---|---|---|
| *12 July* | *21 July* | *EarthExpedition Group B* | *17* | *3* | *20* |
| *20 Aug* | *29 Aug* | *Bath Spa University - UK* | *11* | *4* | *15* |
| *10 Oct* | *12 Oct* | *Dartmouth College - USA* | *18* | *4* | *22* |
| *Total Overnight International School Groups* | | | *163* | *34* | *197* |

# C. Working Guests, local and International Interns

Working Guests are essential to CCF's daily operations and play a crucial role in supporting our student interns. They bring valuable experience and skills, which they share through daily interactions, helping to develop the students' knowledge and abilities. By integrating Working Guests with interns, we foster the exchange of knowledge, life experiences, cultures, and traditions.

During this reporting period, CCF hosted **22 Working Guests**, including 13 females and 9 males. Of our Working Guests, 73% were from the United States, 9% from the United Kingdom, with the remaining guests coming from Sweden, Canada, Austria, and Australia.

In addition, CCF hosted **24 Namibian interns**, primarily from NUST and UNAM, as well as graduates. We also welcomed **29 international interns**, with 31% from the USA, 13% from the UK, 38% from Canada, and the remaining interns from Japan, Turkey, India, Belgium, and Wales. Along with these interns, CCF hosted 4 PhD students and 2 Master's students. These interns and students received training in various fields, including veterinary medicine, zoology, ecology, wildlife science, animal science, environmental studies, international development, and genetics.

# D. Future Farmers of Africa

CCF's Future Farmers of Africa (FFA) programme is crucial in CCF's mission to educate farmers about coexistence with predators. HWC and wildlife management training are among the most important aspects of this programme.

## Training Focus: Cheetahs and Predators Ecology

***1. Biology***
Anatomy, behavior, social structure, diet, and adaptations.
***2. Habitat***
Importance of savanna ecosystems, threats to Predators survival.
***3. Conservation***
Importance of Cheetah conservation, roles of human communities.

*Table 62: Future Farmers of Africa outreach programme during January to December 2024.*

| Date | Village | Conservancy | Number of Attendance |
|---|---|---|---|
| 2 June | Okondjatu | African Wild Dog | 62 |
| 2 June | Ehaa roukora | African Wild Dog | 30 |
| 3 June | Otjikango Tjozangarangombe | Otjituuo | 33 |
| 3 June | Ongongoro | Otjituuo | 21 |
| 4 June | Omungondovineja | Okamatapati | 27 |
| 4 June | Mooi Plaza | Okamatapati | 25 |
| 5 June | Okondjatu | African Wild Dog | 24 |
| 5 June | Ekuenje | African Wild Dog | 44 |
| 6 June | Ohamuheke | Ozonahi | 24 |
| 6 June | Okahitua | Ozonahi | 22 |
| 25 June | Omatanga | Ozonahi | 23 |
| 25 June | Otomborombonga | Ozonahi | 27 |
| 26 June | Ororuku | Otjituuo | 33 |
| 26 June | Okaamatutjindo | Otjituuo | 21 |
| 27 June | Okaari | African Wild Dog | 22 |
| 27 June | Orukune | African Wild Dog | 24 |
| 28 June | Okomungondo | Okamatapati | 24 |
| 28 June | Omusarokumba | Okamatapati | 25 |
| 03 July | Ehuaroukara | Otjituuo | 32 |
| 12 July | Okatjoruu | Otjituuo | 54 |
| 13 July | Coblenz | Otjituuo | 40 |
| 20 July | Elandspan | Otjituuo | 7 |
| 04 August | Ozongue | Otjituuo | 40 |
| 08 August | Omarindjuozongombo | Otjituuo | 23 |
| 21 August | Ongongoro | otjituuo | 25 |
| 24 August | Okamatutjindo | Otjituuo | 19 |
| 18 September | Omatupa | Ozonahi | 35 |
| 20 September | Omaihi | Ozonahi | 31 |

| | | | |
|---|---|---|---|
| *02 October* | *Ombuyovakuru* | *Ozonahi* | *21* |
| *06 October* | *Ohakane* | *Ozonahi* | *18* |
| *09 Oct* | *Okahitanda* | *African Wild Dog* | *29* |
| *09 Oct* | *Okamaruru* | *African Wild Dog* | *19* |
| *09 Oct* | *Okamapingo* | *African Wild Dog* | *16* |
| *10 Oct* | *Okatuokoverua* | *Otjituuo* | *25* |
| *10 Oct* | *Otjirutjongombe* | *Otjituuo* | *26* |
| *10 Oct* | *Riempan* | *Otjituuo* | *15* |
| *11 Oct* | *Okoutakaha* | *Okamatapati* | *18* |
| *11 Oct* | *Okomutenja* | *Okamatapati* | *22* |
| *11 Oct* | *Otjikuryoma* | *Okamatapati* | *25* |
| *12 Oct* | *Omupanda* | *Ozonahi* | *19* |
| *12 Oct* | *Ombujovakuru* | *Ozonahi* | *17* |
| *12 Oct* | *Okanjokomukona* | *Ozonahi* | *23* |
| *21 Nov* | *Omutjondundu* | *African Wild Dog* | *24* |
| *21 Nov* | *Okatupapa* | *African Wild Dog* | *10* |
| *21 Nov* | *Okonjeinja* | *African Wild Dog* | *16* |
| *22 Nov* | *Okovimboro* | *Ozonahi* | *14* |
| *22 Nov* | *Okatuuo* | *Ozonahi* | *30* |
| *22 Nov* | *Oukuvasa* | *Ozonahi* | *12* |
| *23 Nov* | *Riempan* | *Otjituuo* | *17* |
| *23 Nov* | *Okombungu* | *Otjituuo* | *15* |
| *23 Nov* | *Orusuuo* | *Otjituuo* | *14* |
| *24 Nov* | *Onderakurupa* | *Okamatapati* | *14* |
| *24 Nov* | *Okatuhoro 2* | *Okamatapati* | *23* |
| *24 Nov* | *Ondohoka* | *Okamatapati* | *22* |
| *Total Attendance* | *39 Villages visited* | *4 Conservancies visited* | *1321* |

In addition to the FFA outreach programme, CCF hosted a group of eight conservancy game guards and 3 groups of farmers for a 4-day intensive training program at our Research and Education center (Table 60).

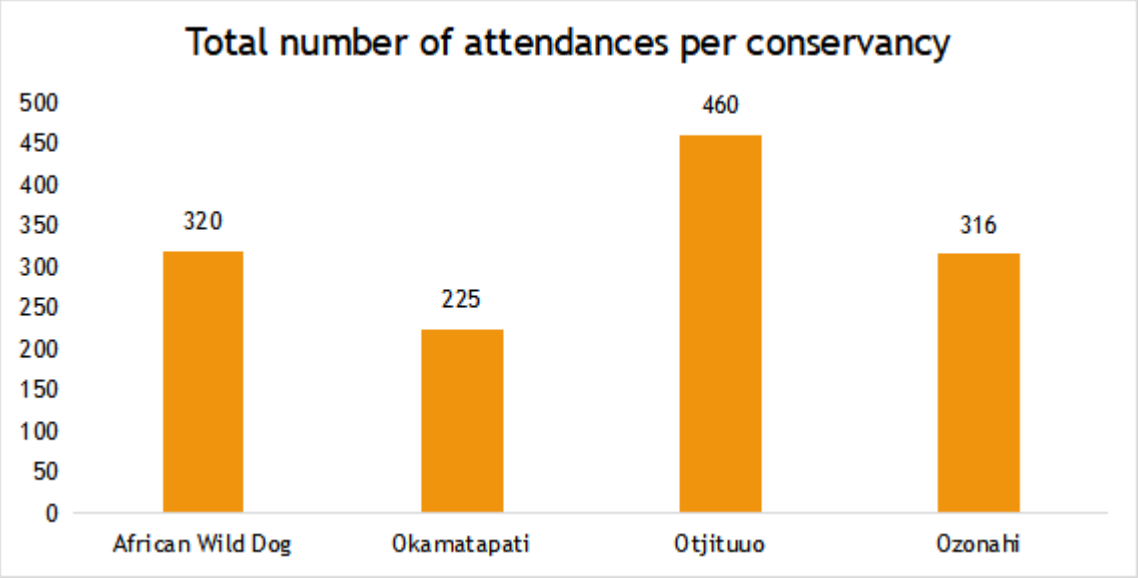


*Figure 80: Total number of attendances per conservancy*

During the reporting period, the education team conducted training sessions across the four eastern conservancies, reaching a total of **1,321** participants, as recorded in the attendance register. Otjituuo Conservancy had the highest number of participants, with 460 individuals, due to the increased number of training sessions in the area. This was followed by African Wild Dog Conservancy with 320 participants, Ozonahi Conservancy with 316, and Okamatapati Conservancy with 225 participants.

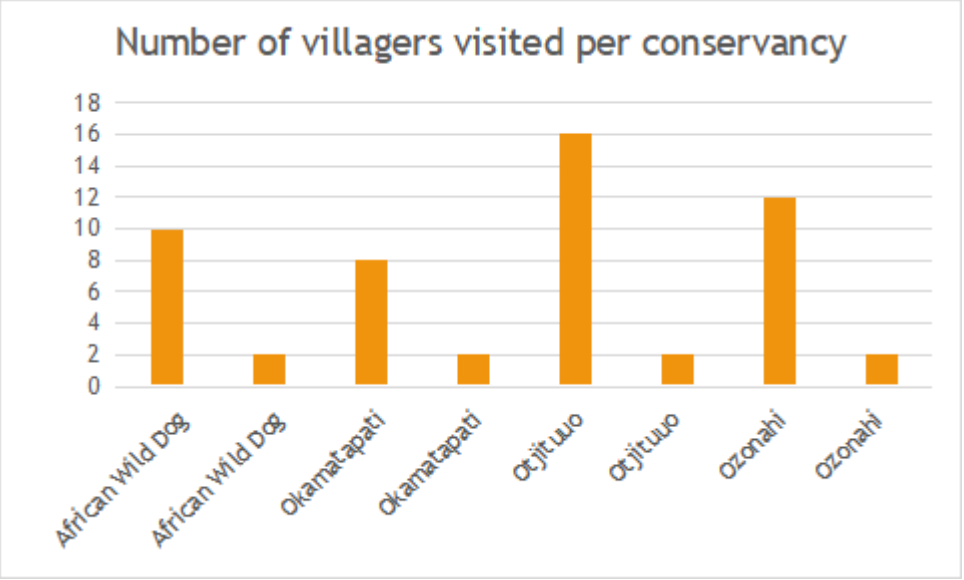


*Figure 81: Number of villagers visited per conservancy*

In 2024, the education team conducted several training sessions across different conservancies. We trained 18 villagers in Otjituuo Conservancy, followed by 14 villagers in

Ozonahi Conservancy, 12 villagers in African Wild Conservancy, and 10 villagers in Okamatapati Conservancy. In total, **44 villagers** participated in the training sessions.

*Table 63: Farmers and conservancies members attending training programs at CCF January to Dec 2024.*

| *Date In* | *Date Out* | *Farmers* | *Students* | *Adults* | *Total* |
|---|---|---|---|---|---|
| 13 May | 18 May | Conservancies game guards | | 8 | 8 |
| 19 Sept | 22 Sept | Omaheke Farmers Group - Governor | | 15 | 15 |
| 11 Nov | 13 Nov | Okondjatu Farmers Group | | 15 | 15 |
| *03 Dec* | *06 Dec* | Kunene Farmers Group | | 20 | *20* |
| Total Overnight Namibian Farmers | | | | 58 | 58 |

# E. Conferences, Workshops and Other Activities

## E.1 Conferences & Meetings

The education team participated in several key events, starting with the *NASCO Annual General Meeting* in Windhoek, where NASCO provided updates on its activities over the past year and elected new central committee members, including Bogdan, who was nominated by CCF.

Additionally, the team attended the *CBNRM Hub Launch* in Windhoek, engaging with various stakeholders from the conservation sector and government ministries. During this event, the education department showcased CCF's ongoing projects, such as the rabies campaign and the Future Farmers of Africa training.

The team also participated in the *Biomass Fair* in Otjiwarongo, the *Okakarara Trade Fair*, and the *Gootfontein Show*, further promoting CCF's conservation initiatives. Finally, the education team contributed to discussions at the *Dr. Theo-Ben Gurirab Lecture Series* in Otjiwarongo.

## E.2 Environmental Days

During this reporting period, CCF celebrated three international environmental days.

For World Wildlife Day on 3rd March, the education department hosted an event in Otjiwarongo with local schools, the Ministry of Environment, Forestry and Tourism, and B2 Gold, where students presented posters on wildlife conservation.

On Earth Day, 22nd April, CCF donated three monkey thorn seedlings to Karundu Secondary School, where the environmental club, teachers, and education team planted them after a presentation and speeches.

For International Day for Biodiversity on 22nd May, the education team visited Paresis and Karundu Secondary Schools to teach students about Namibia's biodiversity, focusing on the variety of plants and animals.

## F. International Cheetah Day

On 4th December, CCF hosted International Cheetah Day at the center, with each department setting up a stand to showcase their work. Albertina Haimbala, Miss Earth Namibia was part of the event and was popular with our visitors. This year the event featured sports, including a 5-a-side soccer match, which the CCF team won, and volleyball, where Nampol emerged victorious. There were also fun games for kids, and visitors had the chance to win prizes, such as a cheetah drive, gifts, and more. The event attracted **257** visitors to CCF.

*Figure 82: ICD celebrations with staff members, school and sports groups.*

# VI. Structural Activities

## A. Namibian Facility Developments

### A.1. Existing Structural Projects and New Projects

This reporting period (2024) saw continued investment in the CCF Namibia infrastructure. Improvements include:

- Steam Bio Africa biomass processing plant concluded operations for the EU grant. This involved torrefaction of over 200 tons of woodchip from Namibia. Botswana, and South Africa. The plant was decommissioned and awaits necessary modifications to improve throughput.
- The Main Campus PV array was increased by 75 kW to 300kW; and the battery capacity from 800 kWh to 1200 kWh.
- Two 25 kw biomass-fueled power plants were commissioned at the BTDC.
- Continued renovation of older North Staff housing units.
- Bush clearing and road work was completed and perimeter fencing of the new 200ha cheetah compound on Elandsvreugde.
- Boskop worker housing and some of the Main Campus Wi-Fi coverage was improved.
- Continued roadwork and firebreaks by the heavy equipment (bulldozer, roadgrader).
- Roof repair at lodge units 6/7 and a temporary repair at Babson House.

### A.2 Automotive

Vehicles and tyre repair continue to be an expensive and time-consuming problem at CCF. Table 43 lists CCF's vehicles and their condition at the end of December 2024.

*Table 64: CCF's vehicle fleet and each vehicle's status at the end of December 2024.*

| Vehicle | Status |
|---|---|
| **Safari vehicles** | |
| Safari Green cruiser | Running |
| Safari Small white cruiser | Engine Failure |
| Safari white ford | Running |
| Safari White Toyota cruiser | Running |
| Brown Toyota landcruiser | Running |
| | |

| **Allocated Vehicles** | |
|---|---|
| Toyota GD6 D/cab (Bruce & Laurie) | Running |
| Toyota GD6 C/cab (Scat dog) | Running |
| Toyota GD6 C/cab (Gebhard) | Running |
| Toyota GD6 D/cab (Ecology) | Running |
| Toyota s/cab base (Facilities Engineer) | Running |
| Toyota Land cruiser s/cab Farm manager | Running |
| Toyota Land cruiser d/cab (clinic) | Running |
| Toyota hilux GD6 (APU) | Running |
| Toyota Land cruiser s/cab (Assistant Farm Manager) | Running |
| Toyota land cruiser S/cab (Janhelpman farm) | Running |
| Toyota legend c/cab Education outreach | Running |
| Toyota legend c/cab Husbandry | Running |
| Toyota GD6 Single cab Brown (storeroom) | Running |
| Nissan N5947OT (EU) | Running |
| Nissan N4456OT (Tika) | Running |
| Nissan N7025OT ( CCF East/ Gobabis) | Running |
| Nissan N7032OT (Education) | Running |
| 1997 Toyota 22R (Tracking) | Running |
| 1987 Toyota 4Y (ecology) | Running |
| | |
| **Farm Vehicles** | |
| | |
| Tata s/cab (farm vehicle) | Running |
| Silver Toyota D4D (farm vehicle) | Running |
| Brown Toyota 3F land cruiser (mechanics vehicle) | Broken Steering Box |
| Toyota 4y (old scat Dog vehicle) | Running |
| Toyota raider Petrol Rebuild (Uri) (Jan Helpman farm) | Running |
| Silver Isuzu Kb Single cab (Padberg farm) | Running |
| Toyota Raider (Jan Helpman farm) | Running |
| White Isuzu KB | Running |
| | |

| | |
|---|---|
| **Staff Transporters** | |
| Quantum Minibus #1 (staff transport) | Running |
| Isuzu Truck (staff transport) | Running |
| **Trucks** | |
| Mercedes- Benz Truck (Jan Helpman Farm) (old) | Running |
| Isuzu Truck (Jan Helpman Farm) (Transport of material) | Running |
| Mercedes- Benz Truck (Material transporter from and to town) | Running |
| | |
| **Electric Golf carts** | |
| Tourism | Running |
| Tourism management | Running |
| Kitchens | Running |
| LSGD program | Out of order |
| Clinic | Running |
| Bruce | Running |
| Cheetah team | Running |
| Engineering team | Battery problem |
| Biomass | Running |
| | |
| **Skid steers** | |
| Gehl V400 | Running |
| Gehl R150 | Running |
| John deer 332 | Running |
| CAT 289D (Bruce) | Running |
| CAT 289D YV8N57 | Out of order |
| | |
| **Heavy Machinery** | |
| D6 Bulldozer | Running |
| 12K Road grader | Running |
| | |
| **Tractors** | |
| Big John deer 6603 | Out of order |

| | |
|---|---|
| Small John deer 5775E | Running |
| Messy Ferguson 290 | Running |
| Messy Ferguson 290 | Running |
| Messy Ferguson 290 4x4 | Running |
| Messy Ferguson 6711 (Jan helpman) | Being repaired |
| Old small Messy Ferguson 135 | Running |
| Old small Messy Ferguson 135 | Running |
| Big Messy Ferguson 680 4x4 | Running |
| John Deere 2140 | Out of order |
| | |
| **Trailers** | |
| Skid steer Trailer | Working |
| Diesel Trailer | Working |
| Clean water 2500l Trailer | Working |
| Grey water 2500l Trailer | Working |
| Grey water Trailer (old) | Working |
| 3x Tractor tipper Trailers | Working |
| Manure spreader Trailer | Working |
| 4x old Bush tipper Trailers | Working |
| | |
| **Others** | |
| Blue V-Mac Bush Harvester | Working |
| 2x Hay Baler | Working |
| Hay grass rake | Working |
| 3x Bush Movers | Working |
| Big butterfly grass mower | Being repaired |
| Seed planter | Working |
| Gandini woodchipper | Working |
| Heizohack woodchipper | Working |
| Morbark woodchipper | Working |
| Forklift (Bush Block) | Working |
| Husqvarna ride on Mower | Working |

# B. CCF Namibia Staff

## B.1 Technical Staff

CCF Namibia employs a total of 165 people. The technical staff are listed below:

Laurie Marker, DPhil – Founder and CEO

Bruce Brewer, PhD - General Manager

Johan Britz – Farms & Biomass Manager

- Panduleni Andreas– Veterinary Technician
- Anne-Marie Bekker – Business Manager
- Tanya Britz – Controller
- Bogdan Cristescu – Asst. Director Ecological Research
- Ignatius Davids – Education and Tourism Officer
- Modesta Fabianus – Animal Technician
- Karin Falk – CCF Accountant
- Johan Gibson - Assistant Farm Manager
- Hafeni Hamalwa – Laboratory Manager
- Tim Hofmann – Scat Detection Dogs
- Simeon Heita – Creamery
- Immanuel Helao – Facility Engineer
- Eveline Ikondja – Detection dogs
- Wilma Immanuel – Cook
- Job Iyambo – Tour Guide & Cook
- Secelia Iyambo – Cook
- Bianca Jacobs – Tourism Manager
- Ruan Jacobs – Security & Mechanics
- Becky Johnston – Studbook Keeper

- David Kadhila – Engineer
- Ester Kalenga - Ecology
- Frans Kambanda – Mechanic
- Joe-Brown Kambombo - Educator
- Shannon Kandjai – Education Manager
- Veisy Kasaona - Community Programs Assistant
- Utera Katjavivi – Ecologist
- Himeezembi Kuhanga – Tourism Assistant Manager
- Tracy Maketo – Tourism
- Kundai Makoni – Smallstock Assistant Manager
- Justin Moya – Cheetah Keeper
- Elifas Nashini – Cheetah Keeper
- Matti Nghikembua – Forest Steward & Chief Ecologist
- Gebhardt Nikanor – Education and Tourism Officer
- Calum O'Flaherty – Livestock Guarding Dog Program Manager
- Kennedy Pendukeni - Cook
- Lea Petersen – Chief Cheetah Keeper
- Lauren Pfeiffer– Personal Assistant to the Director
- Simone Reyneke – Animal Technician
- Teresia Robitschko – Senior Personal Assistant to Director
- Chrizelda Sawas – Tourism
- Anne Schmidt-Küntzel, DVM, PhD - Research Geneticist & Asst. Director for Animal Health and Research
- Nafimane Shapi – Cook
- Abraham Shihepo – Biomass Technician
- Teresia Shihepo - Genetics

- E. Shipiki – Mechanic
- David Shipingana - Forestry and Safety Officer
- Tryves Shivolo – Tour Guide
- Francsina Simson – Creamery
- Sheweta Singh– Genetics Lab Technician
- Winnie Skryer – Tourism
- Heike Stackmann - Volunteer Co-ordinator and Public Relations Officer
- Jappie Swartz – Stockman
- Heino Theron – Maintenance
- Tipenandjar Tuaandi - Tourism
- Stijn Verschueren – Ecologist
- Johannes Viljoen – Educator
- Hanlie Visser – Creamery
- Paul Visser – Estate Manager
- Lukas William - Cook
- Hanlie Winterbach – Carnivore Researcher

# VII. Organisational Activates

## A. Fundraising

### A.1 Namibia

#### A.1.1 Board of Governance

In April 2024, the Namibian firm of Grant Thornton and Neuhaus started the annual financial audit.

#### A.1.2 Fundraising

##### Grants

In the first half of 2023, CCF Namibia was fortunate to receive direct contributions from partner organizations in Australia, France, Germany, Namibia,the United Kingdom, and the USA.

### A.2 International

CCF has registered charitable organisations in the US, Australia, Belgium, Canada, Italy, and the UK. CCF also has fundraising partners in France, Germany and the Netherlands. All CCF's partner organisations promote education, fundraising and conservation awareness.

#### A.2.1 CCF USA

##### *Board Governance*

During this period, the USA Board of Directors and Trustees had four meetings: 1 March (teleconference), 7 June (teleconference), 28-29 September (in person) and 10 December (teleconference). Five resolutions were passed during these meetings. Resolutions and Dates are listed in Table 64 below:

*Table 65: Resolutions passed from 1 January to 31 December 2024*

| Number | Date Passed | Resolution Title |
|---|---|---|
| 1116 | 1-Mar-2024 | Resolution to Recognize Restricted and Designated Funds (4th quarter 2023) |
| 1117 | 7-June-2024 | Resolution to Recognize Restricted and Designated Funds (1st quarter 2024) |
| 1118 | 7-June-2024 | Resolution to Accept 2023 Audited Financial Statements |

| | | |
|---|---|---|
| 1119 | 29-Sep-2024 | Resolution to Recognize Restricted and Designated Funds (2nd quarter 2024) |
| 1120 | 10-Dec-2024 | Resolution to Recognize Restricted and Designated Funds (3rd quarter 2024) |

All committees of the board are meeting regularly and have been reporting at board meetings.

## Operations

CCF continues to rent an office at 200 Daingerfield Rd., Suite 200, Alexandria, VA 22314. Most CCF employees do not work within commuting distance of the office, so remote work has been a part of the CCF culture before Covid-19.

Rogers & Company, CPAs, conducted CCF's annual audit for 2023 and completed the process in April 2024.

### *CCF USA Staff*

CCF USA welcomed two new hires during 2024: Malee Oot joined our newly-established Communication Department (led by Heather Ravenscroft), and Nathaniel Fields took over grants management (replacing Dr. Indrani Sasmal). Additionally, Jennifer Johnson was given the title, "Director of Development". Current staffing as of 31 December 2024 is as follows:

- Brian Badger – Director of Conservation and Outreach
- Lexi Beaty - Development Associate
- Nathaniel Fields - Development Manager (Grants and Designated Gifts)
- Jennifer Johnson - Director of Development
- Susan Kauffman - Constituent Relationship Manager
- Paula Martin - Executive and Development Assistant
- Heather Ravenscroft - Communications and Marketing Manager
- Robert Skidmore - Director of Operations and Finance
- Jessica Sorrentino - Development Associate
- Dionne Stein – Development Manager (Events and Special Projects)

## Fundraising

CCF USA set the goal of raising US$6,792,000 for 2024 including revenue from all sources. The total revenue raised towards reaching that goal was US$6,570,857 (unaudited - Table 65).

*Table 66: Fundraising goals versus actual funds (USD) from 1 January – 30 June 2024.*

| Campaign | 2024 Goal | Actual | Difference |
|---|---|---|---|
| Bequest | - | 1,095,362 | 1,095,362 |
| Book Sales | 2,000 | 943 | -1,058 |
| Chapter Events | 310,000 | 231,885 | -78,115 |
| Chewbaaka | 750,000 | 671,316 | -78,684 |
| Designated | 1,150,000 | 942,722 | -207,278 |
| Endowment | - | 60,000 | 60,000 |
| Fall | 150,000 | 71,617 | -78,383 |
| General Merchandise | 5,000 | 411 | -4589 |
| Gift In Kind | 30,000 | 18,417 | -11,583 |
| International Contributions | 2,025,000 | 1,750,000 | -275,000 |
| Namibian Merchandise | 10,000 | 5,034 | -4,966 |
| Newsletter | 150,000 | 138,992 | -11,008 |
| Recurring | 170,000 | 148,229 | -21,771 |
| Sponsorship | 250,000 | 91,659 | -158,341 |
| Spring | 150,000 | 87,783 | -62,217 |
| Volunteer Fees Namibia | 40,000 | 24,378 | -15,622 |
| White | 350,000 | 202,242 | -147,758 |
| Year End | 1,250,000 | 1,029,867 | -220,133 |
| Totals: | 6,792,000 | 6,570,857 | -221,143 |

## Campaigns

The CCF's Annual Fund Campaign includes four direct mail appeals: the Spring Appeal, the Chewbaaka Memorial Challenge, the Fall Appeal, and the Year-End Challenge. Each direct mail appeal includes several mailing components to targeted audiences during the time period of the appeal and is supported with e-mail solicitations. In addition to these major campaigns, several smaller, independent e-blast efforts are incorporated throughout the year, as well as two printed newsletters, two electronic newsletters, and two electronic 'Notes from the Field'.

## Appeals

### *Spring Appeal*

An initial mailing to 7,396 USA subscribers was sent in March 2024, including various levels of the high, medium, low, and non-donors segmentations (Table 46). Spring Campaign letters were sent and targeted to annual and recurring donors. The campaign raised US$87,783

### Fall Appeal

An initial mailing to 7,590 USA subscribers was sent in October 2024, including various levels of the high, medium, low, and non-donors segmentations (Table 46). Fall Campaign letters were sent and targeted to annual and recurring donors. The campaign raised US$71,617

### Chewbaaka Wild Cheetah Challenge

An initial mailing to 8,469 USA subscribers was sent in July 2024, including various levels of the high, medium, low, and non-donors segmentations (Table 46). A second effort was mailed to 2,724 USA subscribers in August 2024. Chewbaaka Campaign letters were sent and targeted to annual and recurring donors. The campaign raised US$671,316

### Year-End Cheetah Challenge

An initial mailing to 7,501 USA subscribers was sent in November 2024, including various levels of the high, medium, low, and non-donors segmentations (Table 66). A second effort was mailed to 4,496 USA subscribers in December 2024. The Year-End Campaign letters were sent and targeted to annual and recurring donors. The campaign raised US$1,029,867.

*Table 67: Number of donors giving mid-year in each stage in 2023 versus 2024. Includes individual donors only.*

| Donation Amount in US Dollars | Number of Donors Year-End 2023 | Number of Donors Year-End 2024 |
|---|---|---|
| 1 - 49 | 150 | 130 |
| 50 - 99 | 210 | 196 |
| 100 - 249 | 453 | 410 |
| 250 - 499 | 197 | 190 |
| 500 - 999 | 155 | 152 |
| 1,000 - 2,499 | 141 | 132 |
| 2,500 - 4,999 | 34 | 41 |
| 5,000 - 9,999 | 27 | 30 |
| 10,000 - 19,999 | 24 | 23 |
| 20,000 - 49,999 | 17 | 17 |
| 50,000 - 74,999 | 3 | 1 |
| 75,000 - 99,999 | 0 | 0 |
| 100,000 and above | 1 | 1 |

## Cheetah Sponsorship

Total revenue from cheetah sponsorships in the USA for 2024 at Year-End was US$91,659. Bi-annual video updates on 32 of CCF's resident cheetahs as well as CCF's releasable cheetahs and Livestock Guard Dogs are scheduled to be sent out in early July and late December 2024. Many of our appeals and Facebook posts promote cheetah sponsorships.

## Newsletters and e-Blasts

### Cheetah Strides

Two ‘Cheetah Strides’ newsletters were mailed in 2024. Issue no. 27 was mailed in March 2024 to 11,738 people in the USA. Issue no. 28 was mailed in September 2024 to 12,164 people in the USA. Both generating $138,992.

### Dr. Laurie Marker’s ‘Notes from the Field’

Alternatively, with ‘Cheetah Strides’, CCF sent out six ‘Notes from the Field’ e-letters worldwide. The e-letters were sent in February, April, June, August, October and December to approximately 20,000 US subscribers and approximately 10,000 international subscribers. CCF continues to work to monitor and comply with the General Data Protection Regulation (GDPR) rules for the European Union (EU) to gain voluntary consent from subscribers who opt-in to get email communications.

### Chapter Events and Laurie Marker Spring and Fall Travel & Meetings

Complementing Dr. Marker’s visits to the US, regional chapters have been encouraged to support events during 2024 and throughout the year to spread the word about CCF in their regions. Programs like Ask Me Anything, CheetahTV, Reach The World, Travel & Meetings, WCN, ZAA as well as presentations to corporations and foundations were shared by staff as chapter events. Staff not limited to Brian Badger, Jessica Sorrentino, Dionne Stein, Jennifer Johnson, Lexi Beaty, and more backed Laurie's 2024 visits to the USA and shared CCF’s holistic conservation messages during many partnership US Zoo events. Participation in the Inaugural Global Cheetah Fit Challenge raised $17,765.17 for the USA and Globally raised just under $45,000.00. The total revenue for the USA events for 2024 totaled $231,113.49 which includes Laurie Marker’s Spring & Fall Travels, speaking engagements and events that Dr. Marker attended in person in these regions, and several "education only" events. There are 13 Chapters: AZ, CO, Cubs Club, TX, NE, TN, MI, NY, NorCal, SoCal, WI, WA, and Louisiana. In 2024, Chapter events were shared out by chapters, supported and shared with Social Media posts, community calendar invites, and friend-sharing via email and text.

### Welcome Series e-blasts

An automated Welcome Series e-blasts are sent to new constituents as they are added to the database. The Welcome Series includes five emails focusing on these topics: Welcome to CCF, Educational Programming at CCF, Human-Wildlife Conflict Solutions, Research Program at CCF, and CCF Survey questionnaire.

In 2024, a new Welcome Series was added to target international visitors to CCF’s Centre if they opt-in in compliance with the GDPR using an online form provided at check-in.

## Management of Constituent Information

CCF continues to track more information on each constituent record in our donor database system, Raiser’s Edge. All email blasts, mailing campaigns, and phone calling campaigns are

tracked through Raiser's Edge. Each individual record shows the communications sent and the responses received from that constituent. All web donations, events registration, and Email marketing are processed and managed now through Blackbaud's Online Express (OLX) which fully integrates with the Raiser's Edge. There are 114,328 constituent records in the Raiser's Edge database. There are 18,745 USA email subscribers and 14,233 USA subscribers on the appeal mailing lists. The creation of our online auctions remains hosted through Bidding for Good.

## Designated Giving/Grants/Awards

In the first half of 2024, the Cheetah Conservation Fund (CCF) has undergone significant restructuring within the grants process, with the appointment of a new principal grant writer. This transition has already yielded positive results, including a streamlined grants research process, regular weekly meetings, and the development of efficient procedures to handle new grant opportunities with fast turnaround deadlines.

Grants Applied (January 2024 - July 2024)

March 2024

- Association of Zoos and Aquariums
    - Amount: $22,000
    - Purpose: Optimizing detection of Feline Coronavirus to aid captive cheetahs
    - Status: Pending

May 2024

- Enabel (Belgian Federal Government Development Agency)
    - Amount: $297,000
    - Purpose: Establishing an expanded BioCrime Database in Somaliland, enhancing digital infrastructure for recording and analyzing environmental crimes, and fostering cross-border collaboration.
    - Status: Invited to the 2nd round (deadline July 19, 2024) – Preparing for submission

July 2024

- Forestry and Nature Conservation Agency - Taiwan
    - Amount: $11,860

- Purpose: Community Engagement for Facilitating Community-Based Natural Resource Management Around the Proposed Geed-Deeble Community Conservancy and Forest Reserve in Somaliland
- Status: Pending

- Regina Frankenberg Foundation
  - Amount: $50,000
  - Purpose: Community-Based Natural Resource Management and Wildlife Coexistence in Somaliland
  - Status: Pending

Active Grants (January 2024 - July 2024)

- IUCN Save Our Species Funds
  - Amount: €246,500
  - Project: Assessing Community-Based Natural Resource Management (CBNRM) and Conservancies in Somaliland
  - Progress: Continued development of conservancies and implementation of Namibia's CBNRM approach in Somaliland.
- Department of Environment Food and Rural Affairs (DEFRA) - Illegal Wildlife Trade Program
  - Amount: £593,587
  - Project: LICIT-II: Legal Intelligence and Community Governance for Cheetah Illicit Trade
  - Progress: Enhanced national and regional capacity in the Horn of Africa to combat wildlife crime.
- United States Fish and Wildlife Service
  - Amount: $1,000,000 (plus an additional $34,572 tentatively approved to cover indirect costs)
  - Project: Creating systems to monitor wild cheetahs and determine drivers of illegal trade in the Horn of Africa
  - Progress: Initiated camera trap study in Somaliland; continued collaboration with government entities in the region.
- Rainforest Trust

    - Amount: $96,716
    - Project: Somaliland Geed-Deeble National Park creation
    - Progress: Surveyed proposed park area, deployed camera traps, and advanced legal frameworks for protected areas.
- European Union (in partnership with Deutsche Welthungerhilfe e.V.)
    - Amount: €235,452
    - Project: Engaging Somali communities to improve wildlife trafficking and forest crime control
    - Progress: Merging anti-trafficking and area protection methodologies for sustainable reduction of wildlife trafficking.
- Darwin Initiative
    - Amount: £599,995
    - Breakdown:
        - 2024/25: £250,465.00
        - 2025/26: £212,537.00
        - 2026/27: £136,993.00
    - Project: Enhancing conservation efforts and community governance in Somaliland.

## Active Grants

CCF received an additional no-cost extension on a 2-year grant from the International Union for Conservation of Nature (IUCN) Save Our Species Funds in the amount of €246,500 for the project "Assessing Community-Based Natural Resource Management (CBNRM) and Conservancies in Somaliland" extending the end date from December 2023 to June 2024. The purpose of the project is to assess the viability of adapting Namibia's CBNRM approach and conservancy model to Somaliland and to determine if these strategies can help rural communities mitigate conflict with wildlife and reduce wildlife crime while building local governance systems and increasing community resilience. This funding initiated the process of Conservancy development in Somaliland for Community-Based Natural Resource Management following Namibia's and Kenya's models. The LICIT II is a continuation grant initiated through the IUCN grant.

This is the third year of the 3-year grant CCF received from Department of Environment, Food and Rural Affairs (DEFRA) UK Government's Illegal Wildlife Trade Program in the amount of £593,587 for the project "LICIT-II: Legal Intelligence and Community Governance

for Cheetah Illicit Trade" from July 2022 to June 2025 in Somaliland. This project will enhance national and regional capacity in the Horn of Africa to fight wildlife crime by leveraging gains made through the LICIT project (IWT-066). In addition, proposed community conservation governance will increase community capacity and ownership over wildlife resources, thereby tackling human-wildlife conflict driving IWT. Developing new wildlife crime information and intelligence exchange platforms and strengthened national and regional level legal capacity will allow national enforcement agencies to work better together with neighboring jurisdictions to stop IWT. CCF submitted the Year 2 report to the funder in April 2024 and CCF is on track for Year 3 deliverables.

This is the last quarter of year two in a five-year grant that CCF received from the United States Fish and Wildlife Service in the amount of $1,000,000 for the project "Creating systems to monitor wild cheetahs and determine drivers of illegal trade in the Horn of Africa". The project runs from September 2022 to August 2027. We propose to develop an intensive, multidisciplinary monitoring and analysis strategy for cheetahs to understand the source of cheetah cubs and drivers of the cub trade in the HoA. We have been able to work with the Governments of Somaliland, Puntland and Ethiopia on this project and the project has shown good progress. We have also submitted a revision request to hire additional personnel.

CCF has received an additional no cost extension to extend the grant date to September 2024. The grant from the Rainforest Trust is the amount of $96,716 for the project "Somaliland Geed-Deeble National Park creation for the cheetahs in Somaliland" with the original dates running from January 2023 to December 2023. The purpose of this grant is to help create the first officially recognized, properly legally gazetted and fully operational National Park Protected Area (PA) in Somaliland in line with international standards, Geed-Deeble National Park. CCF field team has been able to survey the proposed project area of Geed-Deeble and surrounding area designated for Phase 2 and Phase 3 development in CCF-Somaliland's Master Plan, and were able to deploy camera traps to document the wildlife species present in that area. So far we have received very interesting findings from some of the camera trap data which includes confirmation of wild cheetah presence in that region. We have been able to complete the amended and new laws and regulations regarding Protected Areas in Somaliland in alignment with the international laws and regulations which will be presented in the Parliament for approval. CCF is working to determine how best to get support to get the new laws passed in parliament.

The European Union grant in the amount of €235,452 in partnership with Deutsche Welthungerhilfe e.V. (WHH), a German Organization with a branch office in Somaliland, for the project "Engaging Somali communities to improve wildlife trafficking and forest crime control" from June 2022 to May 2024 has closed. The project action, for the first time in Somaliland, merged established anti-trafficking and area protection methodologies to achieve sustainable reduction of wildlife trafficking and forest crime and mutual reinforcement of rural livelihoods and conservation in Somaliland (the overall objective). The action builds on previous efforts by CCF and WHH and provides targeted support to fill capacity gaps to enable progress toward the overall objective.

## Future Grant Strategies

CCF has implemented a systematic approach to identifying and securing grants for specific projects. This involves:

- Project leaders and prospective project leads completing a survey to target appropriate grant opportunities.
- Allowing ample time for developing winning proposals.
- Building relationships with program officers at grantmaking agencies prior to submission.

This new process has already identified potential grant opportunities from the following foundations:

- The White Feather Foundation Grant
- World Land Trust Grant
- Elizabeth Wright Ingraham Grant
- SNAPP Funding
- Animal Protection Program
- Oak Foundation Grant
- Conservation, Food & Health Foundation Grant Program
- Lawrence Foundation Grant
- Mohamed bin Zayed Species Conservation Fund Grants

The grants team is also developing a comprehensive grant proposal package for the Rainforest Trust. This grant represents a significant opportunity, with a potential 5-year timeframe and a total award of $18,627,440. The proposal is due by the end of August 2024, and it will encompass detailed plans for conservation initiatives, community engagement, and sustainable practices to ensure the long-term protection of critical habitats. The preparation of this proposal involves extensive collaboration with various stakeholders, thorough research, and strategic planning to meet the stringent requirements of the Rainforest Trust and to maximize our chances of securing this pivotal funding.

*Table 68: Awarded Strategic Ask/Designated Giving and Awarded Grants/Proposals from January – June 2024.*

| Gift Date | Gift Amount | Gift Reference | Name |
|---|---|---|---|
| 16-Feb-2024 | $32,363.33 | | CCF Somaliland |
| 14-Mar-2024 | $75,000.00 | | Baker Trust |
| 04-Apr-2024 | $10,000.00 | | |
| 05-Apr-2024 | $15,000.00 | Namibia | Helen (Misty) Tyree |
| 05-Apr-2024 | $5,000.00 | Somaliland | Helen (Misty) Tyree |
| 05-Apr-2024 | $55,547.50 | Donor Restricted | DEFRA – LICIT II |
| 28-May-2024 | $195,569.05 | Horn of Africa Survey | US Fish & Wildlife Service |
| 03-Jun-2024 | $27,700.00 | | Rainforest Trust |
| 07-Jun-2024 | $57,761.80 | Donor Restricted | DEFRA – LICIT II |

## Corporate Giving

The 2024 Fundraising Plan includes a goal of refining the CCF USA corporate development structure. The end goal is a well-defined and cohesive framework with accessible resources and collateral that can also be shared with CCF International affiliates.

As the framework is refined, the pipeline of current, lapsed and new prospects will be prioritised and cultivated, in partnership with the communications, grants team and corporate strategy subcommittee members.

Current Highlights:

- In late spring, with joint efforts between communications and corporate giving, we collaborated on a percentage of sales campaign with MANTRA's Namibian Collection, a planet-positive performance apparel for on and off the course, raising $10,000. In addition, we leveraged this new partnership to collaborate on a Social Media Mini Match Campaign, raising an additional $2,500 from our joint followers.

- In the fall, Chantecaille, with much stewardship of this long-time corporate supporter, will launch a new eyeshadow palette and social media campaign around

the Cheetah as part of their endangered species collection. This collaborative campaign will raise between $60,000 - $100,000 while bringing awareness to CCF's mission Additionally, there are two other ongoing revenue streams from this partnership: a permanent eyeshadow called Cheetah, from which Chantecaille donates a percentage of sales to CCF quarterly and an addition to their online sales page of the ShoppingGives widget that donates a portion of each sale back to CCF.

- Expected in late 2024 or early 2025, we are awaiting a finalized product collaboration with Joey Toys out of India, which will produce a series of age-appropriate cheetah puzzles from which a percentage of sales will benefit CCF.

- In late 2024, several team members from CCF USA and International Affiliates convened to strategize on potential global partnerships, committing to meeting monthly in 2025. This framework will provide guidance, support, and teamwork to help increase our efforts to expand our reach to larger global partnerships.

## Events

CCF Mid-Year Report, Spring 2024: Cheetah Conservation Collaboration, A Call-to-Action Fundraising Tour

Dr. Marker's North American fundraising tour for spring 2024 was titled Cheetah Conservation Collaboration, A Call to Action, of which she highlighted her successful Cheetah Summit held in Ethiopia last January to all her supporters and significant stakeholders.

Dr. Marker traveled from Namibia and Somaliland to the USA to raise funds for the endangered cheetah with numerous VIP and CCF Chapter events. The national tour started on April 15 and lasted five weeks, ending on May 22. Dr. Marker flew from the East Coast to the West Coast, visiting 10 states and 15 cities.

CCF Board of Directors and Trustees hosted the VIP and CCF Chapter fundraising events in the following major cities: Washington, DC, New York, Seattle, Los Angeles, San Francisco, Minneapolis, and Chicago, with the addition of numerous lectures given at various zoos such as The Turtle Back Zoo, Dickerson Park Zoo, ZACC Utah conference, and the St. Louis Zoo.

Each sponsoring host of the respective areas donated a special amount ranging from $5,000 to $20,000 to be matched by the CCF attending guests. These challenge matches were very successful, with each fundraising event reaching its goal for the spring tour. Dr. Marker was also hosted at various private dinners and Winery events, as well as a special lecture at the Adventurers' Club of Los Angeles and the Rotary Club of Swarthmore, PA.

In conjunction with this year's spring tour, CCF also fundraised through the Spring Appeal and Cheetah Strides, in which all donations captured support CCF's ongoing research and conservation programs in Namibia and Somaliland for the endangered cheetah.

Cheetah Conservation Collaboration, A Call-to-Action fundraising revenue totaled $77, 854.00

## Chapter Events

### Arizona Chapter

- Meets every other month, and a few volunteers attend the All Chapter Zooms
- Held eight meetings with chapter volunteers via Zoom.
- Staffed two volunteer opportunities (see below) at the Phoenix Zoo.
- Earth Day Celebration - April 27, 2024 @ Phoenix Zoo. Educational booth - staffed by three volunteers & supported by a chapter member/Phx Zoo employee.
- International Cheetah Day - December 7, 2024 at Phoenix Zoo. Educational booth with craft activity - staffed by three volunteers and supported by a chapter member/Phx Zoo employee.
- Chapter members promoted and participated in the Cheetah Fit Challenge.

### Colorado Chapter

- Chapter meets quarterly, and a few volunteers attend the All Chapter Zooms
- June 8, 2024, Run Into The Wild Vendor Event – The Wild Animal Sanctuary ($800).
- Teams supported the first USA Cheetah Fit Challenge
- Meet in September to discuss Laurie's visit to the US
- Fall - CSU Auditorium Talk, dinner, and new connections

### Cubs Club USA

- July: The leader changed to Isabelle Busch
- Meets monthly (over Zoom, attendees in multiple states)
- Meetings include worksheets, presentations, games, coloring, cheetah chats, and take-home activities (e.g., pumpkin carving, cheetah masks)
- Cubs Club resources (download worksheets) are available here
- Meetings planned through June 2025

### Louisiana Chapter

- Developing Chapter
- Annual meeting held

- Hosted an event on September 27th. We held a Lake Walk for the Cheetah Fit Challenge. It was our first event so the profit was $5.00.

## Michigan Chapter

- Annual meeting held

## Minnesota Chapter- Lou Riebe

- Support monthly All Chapter Zoom meetings
- Recruiting potential new members
- Coordinated and supported Dr Marker's visit to Minneapolis in May 2024 for meetings with the Minnesota Diaspora and the MN Zoo
- Represented CCF at the East Africa Leadership Summit in Minnesota in June 2024
- Set up a meeting with Dr. Marker and Hafsa Mohamed in San Diego in October 2024 to discuss paths forward between CCF and the Women of the Horn of Africa.
- Visited the CCF facilities in Namibia in August to thoroughly understand everything that CCF is doing
- Met with Abdi Mohamed who supports the MN Institute of Horn of Africa Studies (MNIHAS) to discuss where and how these organizations can collaborate to increase awareness and support conservation efforts
- Working with the MN Zoo to get funding from grants that will educate and involve the MN Diaspora on conservation issues in the Horn of Africa
- $350.00 raised in 2024

## Nebraska Chapter

- Developing Collegiate Chapter

## Northern California Chapter

- Feb. 3rd, 2024 Valentine's Day Paint a Cheetah Event in San Jose ($1405)
- Valentine's Day See's Candies Yum Raiser ($102)

- Easter See's Candies Yum Raiser ($435)
- WCN Spring Expo: ($1230)
- Joanne Spalding Private Dinner: ($1000)
- WCN Fall Expo (no total) w/Dutch dinner afterward at At Water Restaurant
- Happy Hollow Earth Day Event ($0)
- Helped organize and execute a Virtual Art Contest with Paola Bari of the New York Chapter (Nov. 2024)
- Virtual online webinar with Mountain Lion Foundation: Norcal planned, and Brian Badger presented.
- Vosges Haut Chocolat Affiliate campaign (ongoing)

## New York Chapter

- Wine tasting in Poughkeepsie-- the art gallery graciously agreed to host a wine tasting to benefit CCF on Friday, April 12. The event yielded $1934 in profits for CCF.
- In April, the NY Chapter raised and contributed $500 toward vet supplies shipped to CCF in Africa.
- On April 27, our NY chapter participated in the annual WCS fundraiser at the Bronx Zoo. It was done as a team under the banner of CCF in support of our chapter member Kathleen LaMattina, who works at the zoo and regularly volunteers the zoo as an event location for many CCF events.
- The NY Chapter supported the Juried Youth Art Competition during the fall.
- During the last week of September to the first week of October, we participated in the Cheetah Fit Challenge, organized by CCF Team Canada.
- On October 25, we met in Manhattan with founder Dr. Laurie Marker. It was hosted by one of our NY members, Ann Passer.
- In celebration of National Cheetah Day, on Sunday, December 8, the NY Chapter organized a Polar Plunge in Coney Island, NY. The plunge raised over 4K for CCF.

## Southern California Chapter

- EarthFest Balboa Park (April 20): $1830 (split with WCN in NorCal-same times)
- Santa Barbara Earth Day (April 21): $115 (Ahou Yasmine at SB Zoo)
- Adventurer's Club (April 28)

## Texas Chapter

- Became the CCF Kids Club Chapter summer of 2024

- Event at the Austin Zoo Nov 1st
- In December, Jennifer Warner took over the Texas Chapter

## Tennessee Chapter

- Support monthly All Chapter Zoom meetings.
- Currently one active volunteer, and continues to seek out potential new members.
- As interim Texas Chapter leader, Russ worked with Dionne, Jessica, Isabelle Busch, and existing members to create the Cheetah Kids Cub Club Chapter. Meetings began summer of 2024, and attend monthly meetings. Sponsored a six-year-old to join the Kids Club.
- From September 20-October 6, 2024, individual and team fundraising was formed for the Cheetah Fit Challenge 2024. Tennessee Chapter Cheetah Coalition horseback trail riding group realized $659 in donations.
- From October 1 - October 31, 2024, participated in CCF's Annual Online Auction. TN Chapter contributed three items, and the total money raised on bids was $760.
- Dec. 4, 2024 - Set up a FB Birthday/Giving Tuesday donation site and attended the Memphis Zoo ICD activities with Dapper & Donovan, the cheetahs. Money raised on FB/Giving Donation site over two weeks totaled $133.
- Total monies raised by Tennessee Chapter for 2024 = $1,552

## Washington, DC Chapter

- 2024 Re-up meeting on Chapter 3/27/24 with Krasi & Dionne
- April 27, 2024: Dutch dinner featuring Dr. Laurie Marker - Discussed goals and agenda for the DC chapter. During our Dutch dinner featuring Dr. Laurie Marker on April 27, 2024, we discussed goals for our DC chapter
- Supported the 2024 Fall Gala in DC with Dr. Laurie Marker, which included organizing and hosting the event, recruiting items for the auction, and coordinating local volunteers.
- Recruited new members and expanded the chapter's volunteer base
- Participated in CCF's Annual Online Auction
- Collaborated with local zoos and community organizations to host educational outreach events, promoting awareness about cheetah conservation and CCF's mission.
- Met with the Smithsonian's National Zoo to discuss potential collaboration on educational programs and conservation **initiatives.**

Cumulative Chapter Fundraising Totals: $231,113.49 to include tours, online auctions, and miscellaneous fundraising activities not limited to educational booths and fundraising activities.

## A.2.2 Aktionsgemeinschaft Artenschutz (AGA) e.V.

### Exhibition & Info Booths

AGA was able to show the cheetah exhibition all together 6 times at schools, fairs, events (e.g. nature photography days), and the botanical zoological garden Wilhelma. An updated English version for Namibia and the US is currently under development.

### Special Fundraiser & Grants

Through 2 matched fundraisers at the online-fundraising platform betterplace.org AGA was able to raise about 4.000 Euro for cheetah conservation.

AGA was also able to secure another donation of 2.000 Euro from the Serengeti-Park foundation for new GPS equipment for the detection dogs in Namibia.

AGA has held some auctions with Europe's largest online auction platform "United Charity". It was possible to raise 1.331 Euro for cheetah conservation.

AGA was able to secure a grant from the German Postcode Lottery (DPL) for a detection dog project in Namibia. We received 28.935 Euro from DPL for this project, which started in April 2024 and will run until the end of March 2025.

AGA has once again received a donation of 12.300 Euro from the Konrad Mayer & Peter Scheufler Stiftung.

AGA participated in the Cheetah Fit Challenge and was able to raise about 1.000 Euro.

Annual report 2024 from AGA for CCF

Together with other donations, we were able to transfer 97.485,00 Euro to CCF for cheetah conservation in Namibia and Somaliland.

Further, AGA helped in organizing the transfer and covered the costs for the flight of 2 Kangal dogs from Germany to Namibia. In total, this support covered medical care and the flight tickets, in total 5767 Euro.

So, in total AGA supported the activities for the conservation of cheetahs with 103.251 Euro.

AGA also helps with the settlement of an inheritance of a deceased person from Germany. The inheritance includes a property and financial assets totalling over 1 million Euro.

### Newsletters & Social Media

Throughout the year AGA is using its social media channels, a newsletter tool at the online-fundraising page betterplace.org, AGA´s mail newsletter, homepage and e-mail newsletter and raise awareness about threats to cheetahs, conservation efforts and solutions found in order to inform existing donors and address possible new donors for cheetah conservation.

## A.2.3 Cheetah Conservation Fund Australia (CCFA)

We continue to receive regular donations from Henry and Cecilia Foundation, Zoos South Australia and Goodwill Wines in addition to smaller private donors. CCFA was able to send $19,000 in donations to CCF Namibia during this reporting period.

After moving to a new Facebook page in mid-2023, CCF Australia Facebook page still has low followers (<100 people) despite ongoing efforts to engage with our followers to invite their friends and family to like our page. However, we continue to post regularly on our Facebook page in hopes of gaining more followers.

In June, Laurie's assistant and CCF Australia Director, Lauren Pfeiffer, gave a presentation to Zoos South Australia's volunteers at Monarto Safari Park. The presentation was well received and some volunteers have enquired about the possibility of volunteering at CCF Namibia. Lauren is in contact with the volunteers who are interested in volunteering in Namibia.

CCFA ambassador, Peter Moyo led a group of 10 volunteers from Zoos South Australia, to Namibia who spent a day visiting at CCF Namibia and seeing firsthand CCF's work. Peter and Lauren along with Zoos South Australia volunteer coordinator have been working on coordinating a fundraiser to help raise additional funds for CCF. This fundraiser was still ongoing at the end of this reporting period.

Throughout this reporting period, CCF Australia directors continued their monthly meetings, during which they continued to discuss more ways to get people involved with CCF. In November, Steven Prassas resigned as the organisational secretary and CCFA Director. Steven was one of the founding directors of CCFA and has donated many years to CCF and our mission to save the cheetah. He and his wife, Greta, also hosted Laurie during her Australian tour in 2016. He will be deeply missed.

Jayson McDonald has taken on the role of the organisational secretary and CCFA is still in the process of appointing a new director. A couple of CCF's supporters have been put forward as potential replacements, however the decision will be made in early 2025.

## A.2.4 Cheetah Conservation Fund Canada (Cheetah Canada)

2024 Funds Transferred (Canadian dollars) We raised over $336,142 in 2024 through campaigns, events, corporation/foundation support and Vanier College student internships. We transferred a total of $352,554 to CCF Namibia ($176,666) and to CCF Somaliland ($175,888). As of 2024, we have established a board of six members, with even better representation from regions across Canada.

The board members bring complementary skills, with experience in business, education and the public sector, as well as experience with CCF and broader wildlife conservation issues. Town Hall for Canada on Cheetahs We held an online town hall in May for our supporters from across Canada to provide them with a close-up view of the multiple roles and responsibilities for cheetah keepers at CCF. Canadians Becky Johnston and Nathalie Santerre shared their considerable experience with the cheetahs at Namibia and Somaliland, respectively.

Cheetah Fit Challenge 2024 Our 4th Cheetah Fit Challenge took place September 21st–October 6th. This past year the Challenge was a global event, with several affiliates participating, including the UK, the USA, France and Germany. In Canada, we raised $17,000 which included $8,000 in matching funds. Our Cheetah Fit Challenge engages volunteers from across Canada, to help us promote the event itself, and to draw in new supporters for CCF.

Organizing the event includes all aspects of creating t-shirts and social media communications, promoting the event, using an outside provider for a secure donations platform, and keeping our supporters up to date on the outcomes. The active participation from CCF affiliates (as noted above) has aided our message and strengthened our reach to promote the CCF cause. We will hold the Fifth Cheetah Fit Challenge again in 2025, and it has already been agreed that we will adjust the timing of the two-week fundraiser to the month of June.

CCF Project on Balancing Livestock and Wildlife for Environmental and Economic Sustainability For the fifth year, B2Gold has provided funding for CCF's research project on restoring wildlife - livestock balance in the rural lands in East-Central Namibia. B2Gold 's contribution has provided to date $225,000, reflecting the company's strong commitment to the goals of the project. 2 Vanier College Student Interns Six students from Vanier College interned at CCF in the first half of 2024, from the vet tech and ecology departments. Two professors also visited CCF Namibia for a few days. In the second half of 2024, two social science students from Vanier were at CCF as well as two Vanier business administration students who were student interns. Additional students from Vanier will be traveling to CCF Namibia in the first three months of 2025, although all interns will be returning to Canada before March 31st as the Canadian government funding will be coming to an end after four years and very positive outcomes.

Vanier's academic leadership team is currently exploring new sources of funding to continue the program for interns that would provide new funding sources in Canada. Foundations Our application to the Gordon and Patricia Gray Animal Welfare Family Foundation in 2024 was successful and they provided the final instalment of $11,000 for the Species Survival pens (the third instalment for this project). We also renewed our support from the Alan and Patricia Koval Foundation, with a $15,000 grant. For the coming year 2025, they are supporting a full year's supply of medications and supplements for the cheetahs at Somaliland: flea and tick protection (Frontier XL) and supplements (Predator Powder) to ensure better health of the cheetahs. In the last month of 2024, we were very pleased to receive $150,000 from the Gordon and Patricia Gray Animal Welfare Foundation to support the expansion of the solar plant at GeedDeeble ($100,000) and support for the expansion of pens at CCF Namibia to comply with the new Namibian government regulations. This is a very significant grant, and will make a big difference at both the Somaliland and Namibia field stations. Mara-Meru Cheetah Project (MMCP) in Kenya Since 2022 we have been collecting donations from Canadians who have visited MMCP as tourists. As of the end of 2024, we have collected a total of $46,712 to support cheetah conservation work on behalf of Canadians. 3 Zoos in Canada We are continuing to advance our relationships with the CZA-accredited zoos in Canada.

There are a very small number of zoos that have cheetahs. We have had a connection to the Toronto Zoo for many years, and in recent years we have strengthened the relationship, in large part due to one of our board member's management of the relationship. As in 2023, we have received $3,000 for the LGD program in 2024, as a grant from their Endangered Species Fund. We have continued to collaborate with the Zoo on International Cheetah Day. As well, our board member from Vancouver is engaging the Vancouver Zoo, to help in raising awareness of cheetahs through events such as International Cheetah Day and the Cheetah Fit Challenge.

CCF Canada Application for Trademark As part of CCF's objective of establishing a trademark in each of the countries in which it has official charitable status, we have pursued an application to the Canadian patent and trademark office. This is a re-application, as the first was completed with support from WIPO but was not accepted by the Canadian agency. We were given the opportunity to revise our application. We were then able to engage, on a pro bono basis, the services of a Toronto-based law firm with trademark expertise. The application was submitted on February 29, 2024. We anticipate that it may take 12 months or more to receive a response.

### A.2.5 Cheetah Conservation Fund United Kingdom (CCF UK)

## Fundraising highlights

CCF UK raised £128,153 in 2024 from campaigns, grants, corporate partnerships, individual giving and legacies. £122,949 (USD 156,365) was sent to CCF as follows:

- Namibia: £51,718 in total split as £31,230 for LGDs, £5,000 for FCA School education and £15,488 unrestricted.
- Somaliland. £71,231 in total split as £66,473 for cheetah care and £4,758 for analysers and products.

## Events

a. Engagement Event – Glazier's Hall, London, June –invited current and prospective supporters, Conservation Circle, Corporates, Volunteers, Trustees. Presentations by Dr. Jane Galton and James Hanaway on current CCF global activities and plans for CCF UK. First in-person event for a while, good attendance and small amount of fundraising attached.
b. Namibia Fundraising Trip - 5 participants visited CCF in October with most of the £10k raised to come in via The Big Give and through Matched funding for Feb 24. One of the groups donated £10K from his foundation for the LGD project.
c. Fundraising Gala – London event in November raised £20,000 with a profit of just over £13,000.

d. Dr. Laurie Marker UK Tour – November visit included attendance at Fundraising Gala event, talk at The Big Cat Sanctuary, House of Commons and House of Lords meetings and other supporter/ partner meetings – helping to raise funds (£22,000) and awareness at the Gala and talk and develop prospective partners, events and a potential ministerial visit to Namibia/ Somaliland for the future.

## Individual Giving Campaigns

a. Winter/ Spring – IWT –email and social media campaign raised just over £17,500.
b. Summer – Living with Cheetahs – FFA - £4,248 raised. An emergency appeal for transportation for Anglo American schools' education project raised £4,442.
c. Autumn – The Big Give – Cheetah Care raised over £16,500.
d. Conservation Circle - 16 members grew by 23% since Jan 2023, some donated funds for the autumn Big Give campaign, others gave regularly or provided matching funding for Feb 24 campaign. Some attended the June Engagement Event and Fundraising Gala.
e. Adoptions/ Regular giving New "Adopt a Cheetah" scheme launched in June, now with 52 members giving £672/month. Other regular giving has grown by 46% to just under £10,000 from just over £6,000 at the end of 2022.

## Grants

a. UK Trusts £8,500 received - £2K Michael Marks Charitable Trust (Cheetah Care Somaliland), £2.5K The Carmela and Ronnie Pignatelli Foundation (LGDs Namibia), £4K Marjorie Coote Animal Trust (LGDs Namibia)
b. The Exec Director Dr Jane Galton worked with Shira Yashpe and Indrani Sasmal on Stage 1 and Stage 2 of the IWT Challenge Fund Main grant for a proposal worth £1.5 million, expanding on previous work in Somaliland. This was delivered in October.

## Legacies

a. £24,000 in legacy income.

## Corporate and Zoos

a. Hamerton Zoo: A cheetah day is held every August and CCF UK provided merchandise, raising over £2,800.
b. Exmoor Zoo: MoU signed for annual donation of £4,000. 2023 donation used as matched funding for The Big Give campaign. Signage developed for cheetah enclosures. Potential for further partnership work with events and merchandising in 2024.
c. Dartmoor Zoo: MoU signed and £1,200 donated towards annual upkeep of 2 LGDs.
d. Big Cat Sanctuary: £4,000 donated from conservation fund and through Art exhibition and sale by Artist Penny Wheatley.

e. Yorkshire Wildlife Park – In conversations on potential partnership and grant giving for 2024.
f. Anglo American Foundation: Funded CCF UK for the 4th year for £5,000 to support FCA school education work in hard- to-reach locations in Namibia.
g. Glencore: £13,700 unrestricted donation from their 2022 Christmas Raffle.
h. Limelight Foundation: £10,000 (£9,000 to LGDs) proposed annual donation from CEO of Limelight who attended Namibia Fundraising Trip.
i. Unicorn Ingredients: £1,500 repeat donation through The Big Give to the LGD programme in memory of the CEO's daughter, Jenny.

## PR, Filming and Social Media

*Instagram:* 14% growth to 3,294 followers.

*Facebook:* 48% growth to 7,900 followers.

*Twitter:* 8.5% growth to 1,702 followers.

*LinkedIn:* 95% growth to 1038 followers.

*TIK TOK:* Global platform launched in November and is managed by Zila Motta at CCF UK.

Currently with 41 followers and 403 likes. Push to grow to at least 1,000 followers in the 1st quarter of 2024.

## Volunteers and Cheetah Cubs

Active volunteers (19), participated in face to face and virtual fundraising events. All volunteers on our database (35) received a monthly Cheetah Chit Chat newsletter. Fundraising packs were finalised and distributed to support individual fundraising endeavours. Volunteers attended and helped with the Engagement event, Paws in the Park, Race for Cheetahs, Fundraising Gala and Dr. Marker's talk at The Big Cat Sanctuary – just over £3,000 raised from volunteer/ community activity.

Cheetah Cubs (34). This is CCF UK's programme for young cheetah supporters. They received a bespoke monthly newsletter and attended 3 online workshops on conservation and cheetahs across the year. Individuals attended a meet and greet session with Dr. Laurie Marker in November and participated in Race for Cheetahs and Paws in the Park.

## CCF UK Ambassadors

Sam Bird – Formula e - Neom and McLaren Team Racing Driver – support through PR and social media plus fundraising through his individual campaign in 2024. Shishani – Namibian

Born Singer/Songwriter – Agreed to come on board as Ambassador – details TBC in 2024. They joined our existing Ambassadors, Giles Clark, Julian Norton and Mo Ali

## Organisational Updates

James Hanaway joined as Development Consultant in February to build all income streams with support from P/T Individual Giving Consultant, Matt Smithers and P/T social media/Digital consultant - Hannah Mulvaney left this role in June and was replaced by Zila Motta who is working well.

The Senior Management Team, comprising volunteers, the Executive Director and CCF UK consultants, held 3 meetings throughout the year to discuss and support fundraising and awareness-raising opportunities.

One new Trustee joined the CCF UK Board. Three board meetings were held in 2023.

## A.2.6 Cheetah Conservation Fund France

The year 2024 confirms the potential of our strategy of retaining donations from zoological parks through our participation in the field. CCF France is also continuing its development of scientific skills by carrying out bibliographic summaries for the CCF on the biomechanics and animal intelligence of the cheetah. It's a way to give us more credibility among professionals and to make CCF France visible to the general public through conferences. We continue the awareness program in events and in schools. In order to increase our educational capabilities, we invented a game with animal figurines to explain the major issues of biodiversity around the cheetah.

Summary of events and awareness-raising actions :

| Date | Event | Location |
|---|---|---|
| 04/23 | Conferences in primary schools | ECOLE COLOMBIER - ISSY LES MOULINEAUX |
| 24/05 | Presentation of the cheetah to the public by CCF France and CCF | Zoo Park LA BARBEN Marseille |
| 24/06 | Conference on the reintroduction of cheetahs by the CCF with Barthélémy Bally | CERZA Normandy Zoological Park |
| 24/07 | Animation on the cheetah and biodiversity | BIOPARC Doué La Fontaine |
| 24/07 | Zoo Parc de l'Auxois | Arnay-sous-Vitteaux |
| 24/08 | Public awareness with games on the cheetah and biodiversity | Zoo d'Auvergne |
| 24/09 | Preparation and participation in the Cheetah Fit Challenge | Cheetah Fit Challenge in FRANCE |
| 10/24 | Primary schools | Vanves |
| 12/24 | "World Cheetah Day" + Stand | Zoo de Montpellier |

A few changes occurred to the team in France. Three new members were recruited, Valérie Link , Eric Gueda for mailings and Patricia Goncalvez (Montpellier) to animate the south of France. Audrey Lemaître in charge to organize cheetah Fit Challenge left hir rôle in May 2023. To Improve our awareness capabilities Patricia Goncalvez (Montpellier) has been Trained about the CCF program by Catherine Ebbs.

CCF France organised several events to raise awareness about cheetah conservation during this reporting period.

Among them was four written communications, including three newsletters and one paper which was written to share to the different policies departments. The first newsletter was titled "Saving the Cheetah: A Solution to Climate Change" at COP28 in Dubai and the other newsletter was "Cheetah passion can be enjoyed at any age!", which was written about a 14-year-old cheetah enthusiast and member of the CCF France. The last newsletter was a call for donations. Article on CCF in the magazine "BULLETIN ACPNSCI de l'Amicale des Cadres Police Nationale et de la Sécurité Iintérieur" distributed to the Political Directorates / Ministries / President of the Republic.

Looking ahead, a synthesis about cheetah biomechanics and sports will be updated for the end of 2024 and we are planning a conference on cheetah intelligence for August 2025 with the possible participation from FR3 TV.

## A.2.7 Cheetah Conservation Fund Italy (CCF Italia)

Our activities focused mainly on these areas during this reporting period:

1. We have been focused mainly on the items to send to Somaliland. During the months of March 2024 many items have been shipped to Somaliland (wires, batteries, paints, food and probiotics etc.) and 2 submersible water pumps, but due to the difficult situation in the Red Sea, in 2024 the containers have been stopped until further notice. We then had to repeat new customs forms for all goods, which expired after 3 months. Finally 2 containers left and arrived (although very late) before the end of 2024. All our items shipped to Somaliland were fortunately delivered before the end of December. We also bought other items for Somaliland and Namibia before the end of the year.

*Here you can check some of the items we shipped in 2024 and the value in Euros.*

Packages and Goods Sent to Geed Deeble in 2024:

RETEPLASTIC SRL

Electric Fencing tensioner 60kg 594,30 €

PROGETTO 2050 SRL Fatt. 04/I 05/01/2024 1 Unit HS Code 85068080

Deep Cycle Batteries 12V 100AH 300kg 1686,10 € -Shipped but paid by US CCF

GRIFOVET SRL Fatt. 4204/02 22/3/2024 1 PX Pallet HS Code 23099096

Food for dogs and Cats 110kg 751,68 €

Prolife Dog 20 kg 5 Units

Hill's PD Canine&Fekine A/D 156g 96 Units

Royal V.D. Recovery Cat&Dog 195gr. 96Units

Royal V.D. Gastro Kitten 195 gr. 96 Units

TERREMERSE SOC.COOP. Fatt. T1002024V010000002 6 PX Pallets

HS Code 72299090 Wire 3000kg 5.472,60 € Paid by US CCF

Wire no.12 1,8 mm 1500,00kg

Wire No. 14 2,20 mm 1500,00kg

BSP SRL Fatt. 001/2024 10/01/2024 Box 40 Units HS Code 32081090

PAINT for metal 450kg 6400 €

Cheetah Conservation Fund Italia APS ETS Fatt. 1/2024 1 Unit

HS CODE 63079098 6 kg Surgical disposable masks bulk Donated

TERREMERSE SOC.COOP. Fatt. T1002024VEN0005481 29/02/2024 5 Units

HS Code 23099096

Dog Food 100kg 117,12€

TERREMERSE SOC. COOP. Fatt. T1002023VEN0035502 4 PK Package 4000kg

HS Code 72172030 7,617,60€

Fencing Wire no.14 2.2mm Paid by USCCF

IDROTEK SRL Fatt.2024/78 29/01/2024 1 Unit (crate) kg 90

HS Code 84137029 2. Submersible water pump 1611,92€ - Shipped by us but the second one was paid by CCF USA

DATAMARS ITALIA SRL Fatt.24100528 17/01/2024 1 Unit (Box)

HS Code 85441900 UG Cable 2.5mmx500m coil Double Insulated 6.4 mm OD . 38kg 382,50€

2. We submitted to the magazine *Focus Wild* by Mondadori (Publishing House) to write about cheetahs in an issue of the monthly magazine, and they offered to write for 12 months about cheetahs and also other predators or endangered African species.

3. Our Members, Andrea and Anna, cooperated in the drafting and editing of the articles (4 pages), where CCF Italy and CCF were mentioned on every issue with a picture and a QR code landing on our website. Since then, we received applications from new members and donations from new donors. We hope to cooperate again and suggest to other Publishers similar articles. It's a good advertisement!

4. Betty von Hoenning O'Carroll, has been invited to speak about CCF in Milan in February, invited by the Italian Birds League (LIPU), and it was a good success.

5. We have been invited to 5 schools in the area where I live, and we gave presentations to both Primary and Secondary Schools on February 5,9,and 19 for the Secondary School classes and on March 5,7, and 8 for 5 classes in Primary Schools, for a total number of ca.100 children. We were invited to replicate this presentation again in 2025.

6. In September we started to prepare the new Calendar 2025, and started the sale. We sold them before the end of the year.

7. Ortigia from Sicily (office in Florence) made an offer to raise awareness on CCF on their website _https://www.ortigiasicilia.com/it/charities-. In May, we received a donation of 5.000€ which we sent to CCF USA.

# B. PR, Marketing and Media

## B.1 Social Media

### B.1.1 Facebook

@CCFCheetah: As of 31 December 2024, CCF's Facebook page had 249,653 followers, down from 250,029 followers, on 31 December 2023.

- The post with the most reactions (2,623) this reporting period, was a video Reel of a group of cheetahs in the morning sunrise in Somaliland posted on 10 December 2024.

- The post with the second most reactions (1,409) this reporting period, was a video Reel with a quote from a photographer of the month Allegra Hutton posted on 4 June 2024.

@DrLaurieMarker Fan Page: Dr. Laurie Marker's Facebook page is primarily content shared from other CCF pages with no text added as the repost. As of 31 December 2024, Dr. Marker's Facebook page had 5,780 followers.

### B.1.2 X

@CCFCheetah: As of 31 December 2024, CCF's X page had 23,150 followers, down from 23,263 on 31 December 2023. CCF pays a monthly charge of $8 US for X Blue verification.

- The post with the most likes (366) this reporting period, was a video of a cheetah at sunset in Somaliland posted on 21 November, 2024.

- The post with second most likes (337) this reporting period, was a video of a cheetah at sunrise in Somaliland posted on 15 December 2024.

### B.1.3 Instagram

Instagram is a social media site for photo/image sharing. Posted photos use hashtags to be collected into groups and searchable within the site.

@CCFCheetah: As of 31 December 2024, CCF's Instagram had 47,668 followers, up from 44,688 on 31 December 2023.

- The post with the most likes (2,064) during this reporting period was a carousel on the Cheetah Fit Challenge showing photos of cheetahs, posted on 20 September 2024.

- The post with the second most likes (1,948) during this reporting period was a carousel of photos from Braden Colling, Photographer of the Month posted on 26 November 2024.

### B.1.4 TikTok

TikTok is a social media platform that allows users to create, share, and discover short-form videos, ranging from entertainment to educational content. CCF began its TikTok account in July 2022. This reporting period marks the first report with a complete year's worth of data. As of 31 December 2024, CCF's TikTok account had 3,963 followers, up from 29 followers from the previous period in 2023 (not a full year: August - December 2023). CCF's content had 109,438 video views, up from 7,259 video views from the previous period (not a full year: August - December 2023).

● The post with the most reactions this period (191) is a video of cheetahs at sunrise in Somaliland.

● The post with the second most reactions this period (180) is a video of keepers in Namibia and their "work besties" caring for cheetahs.

### B.1.5 Bluesky

During 2024 a CCF supporter created a Bluesky account on behalf of CCF in anticipation of a new audience competing with X platform. The handle @ccfcheetah.bsky.social was created in alignment with the rest of CCF's social media branding strategy. Due to the unanticipated nature of the platform presence, CCF's staff offered the supporter a volunteer position to post on behalf of the organization. The page has 161 followers as of 31 December 2024 with 151 posts.

### B.1.6 Pinterest

Pinterest is a social media site where users can collect online content from anywhere on the internet and curate "walls" on which they display this content.

@CCFCheetah: As of 31 December 2024, CCF's Pinterest page had an audience of 98,470 pinners, down from 212,000 pinners on 31 December 2023. CCF's pins had 132,570 impressions and 4,860 engagements this reporting period.

### B.1.7 YouTube

YouTube is a media platform that allows users to post and view video content.

@CCFCheetah: As of 31 December 2024, CCF's YouTube Channel had 31,217 subscribers, down 192 subscribers from the previous year (2023). CCF's content received 62,800 views during this reporting period, down from 66,800 views the previous year

● The post with the most views (7.400) was a video "About The Cheetah

● The post with the second most views (4,400) was a video "Do Cheetahs Purr"

# B.2 Website

## B.2.1 Google Search Console and Google Analytics

Search by device from 1 January 2024 - 31 December 2024:

- 212 thousand Clicks on CCF's content from Google's search engine results across all platforms (desktop, mobile, and tablet)
  - +26 thousand from 2023
- 21.1 million Impressions of CCF's content from Google's search engine results, across all platforms (desktop, mobile, and tablet)
  - +1.9 million from 2023
- CCF's average position in Google's search results for desktop users is 8.3 (2023: +1.3)
  - Desktop position is 11.4 (+2.0 from 2023)
  - Mobile position is 6.3 (+0.8 from 2023)
  - Tablet position is 5.4 (+1.9 from 2023)

Site traffic by device from 1 January 2024 - 31 December 2024:

Total pageviews: 440,935 (-2,935 from 2023)

Total users: 204,489 (+6,489 from 2023)

New users: 201,661 (+5,661 from 2023)

- 116,531 Desktop users visited CCF's site
- 82,152 Mobile users visited CCF's site
- 4,907 Tablet users visited CCF's site
- 108 Smart TV users visited CCF's site

## B.2.2 Navigation

Focus on promoting the three main desirable actions for users to the website: donation, visitation, and volunteerism. The kids' page and learn about cheetahs page are also desirable

destinations on the website. The top performing pages accurately reflect our target focus areas for this reporting period.

Total Pageviews Across Website: 1 January - 31 December 2024 - 440,935 pageviews (2023: +16,878)

- /learn/about-cheetahs: 1 January - 31 December 2024 - 119,800 pageviews (2023: +18,091)
- /kids/cheetah-facts: 1 January - 31 December 2024 - 28,814 pageviews (2023: -5,253)
- /get-involved/visit-ccf: 1 January - 31 December 2024 - 21,939 pageviews (2023: +2,006)
- /get-involved/volunteer: 1 January - 31 December 2024 - 11,447 pageviews (2023: -486)
- /donate: 1 January - 31 December 2024 - 11,986 pageviews (2023: -631)

### B.2.3 Donation page tracking

CCF's Donation Page: 1 January – 31 December 2024

- Ways to Give: 3,410 pageviews (-525 pageviews from 2023)
- Donate Once: 11,986 pageviews (-631 pageviews from 2023)
- Donate Sponsor: 5,578 pageviews (-722 pageviews from 2023)
    - /get-involved/ways-to-give/sponsor/: 2,644 pageviews (-2,066 pageviews from 2023)
    - /meet-a-cheetah/: 816 pageviews (-46 pageviews from 2023)
- Recurring: 575 pageviews (-103 pageviews from 2023)

## B.3 Google Ads

CCF spent $5,948.62 to place Google Ads based on a suite of keywords. The cost for these advertisements is covered by CCF's Google for Nonprofits agreement. The Ads received 907 total clicks across all campaigns, MS | CCF - General was the second highest performing with 677 clicks.

## B.4. Media

CCF issued three press releases between 1 January and 31 December 2024.

- *Global Cheetah Summit - A Call to Action as Species' Decline Approaches "Point of No Return"* - 16 January 2024
- *First Global Cheetah Summit Concludes with Key Conservation Commitments* - 8 February 2024
- *Cheetah Conservation Fund and Wild Africa Fund to Launch Major Awareness Campaign in Somaliland* - 29 May 2024
- *Dr. Laurie Marker, World's Leading Cheetah Expert is Nominated for the Indianapolis Prize as She Arrives in the USA* - 19 September 2024
- *CCF is celebrating International Cheetah Day: A Call to Action - Protecting the World's Fastest Land Animal* - 20 November 2024
- *New Documentary Showcases the Cheetah Conservation Fund's Efforts to Save Africa's Cheetahs* - 26 November 2024
- *CCF Continues to Expand its Paw Print in the Horn of Africa* - 6 December 2024