



Namibian *Lion* Trust
FOR LIONS • FOR LIFE • FOR OUR FUTURE

Tel: +264 67 330107/8

Cell: +264 81 354 8538

E-mail: info@namibianliontrust.org

PO BOX 118, Kamanjab, Namibia

www.namibianliontrust.org



Lion Ranger Award Ceremony, 27 October 2023: NLT First Responder, Jackson Kavetu, bottom row, far right; Top Score Lion Ranger NLT Rinoveni Tjaura, bottom row, 2nd from left.

YEAR-END REPORT 2023.

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Background

The Namibian Lion Trust (T# 298/2019) has been active in Human-Wildlife Conflict Mitigation & Community Support, Conservation Education, Lion Research & Monitoring in the Kunene Landscape since its inception in 1997. By 2010, the need for predator-proof, nocturnal livestock 'Bomas' was identified to mitigate conflict in so-called 'hot-spots' on communal farmland, primarily adjacent to the Etosha National Park western and south-western boundaries. A small number of Lion Rangers were elected to monitor lion movement and to support these farming communities. Guided by geo-fence alerts generated by twenty-five GPS-Satellite collars fitted on lions between 2012 – 2023, the Lion Rangers contributed towards reducing domestic stock loss to predation, simultaneously minimizing the need for retaliatory killing of large carnivores, especially lion and spotted hyaena. The onset of a drought that ravaged the Kunene Region from 2013-2021, brought to our attention the presence of lion further afield from the ENP borders, where our Lion Ranger & Livestock Protection Programmes were welcomed in the Khoa-di Hoas, Omatendeka, Orupupa and Ehirovipuka Conservancies. Increased community support and livestock protection, supported by greater knowledge of lion numbers and their movement in relation to livestock herds, was clearly needed on a landscape basis, which saw the welcome collaboration in 2020, between the Ministry of Environment, Forestry & Tourism (MEFT), Namibian Lion Trust (hereafter NLT) and several other stakeholders.

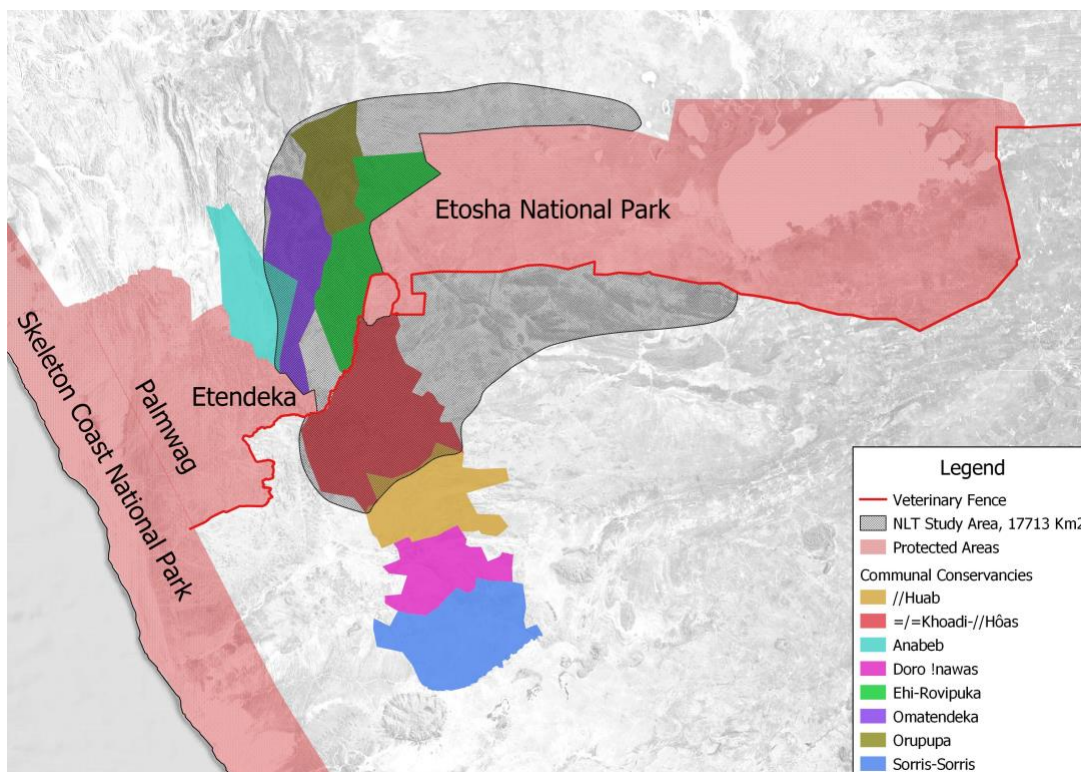


Fig.1, left: Map indicating Namibian Lion Trust Study & Activity area (grey shaded, including 5 Conservancies), covering approx. 17,720 km²



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Lion Rangers, Early-Warning Systems and Rapid Response Units encourage greater tolerance of conflict wildlife, enabling co-existence

The Namibian Lion Trust (NLT) and the aforementioned stakeholders, recently received essential funding from the Lion Recovery Fund and several other conservation-orientated donor-organizations; this has enabled the deployment of forty-nine Lion Rangers, twelve whom are employed by NLT, dedicated to patrolling conflict-zones and to monitor lion across the Kunene Landscape. The much-improved Early-Warning Systems, which include Logger-units that are based near homesteads and in recognized lion range, together with Vehicle Response Units, commonly known as 'Rovers' - GPS, satellite communications modems fitted into the Rapid Response Units (RRU) vehicles, *have notably changed the face of lion conservation in Namibia's northwest*. Whilst on vehicle- & foot-patrols, real-time lion locations are made available to the First Responder of each Rapid Response Unit, either via communications with our base-station or generated by the 'Rover'; this apparatus is of utmost importance in locating lion in need of immediate protection.

Meet Jackson Kavetu, the Namibian Lion Trust senior Lion Ranger & First Responder

Jackson was raised in the Ehirovipuka Conservancy, Kunene Region, and at a young age became a Conservancy 'Environmental Shepherd' or better known as Conservancy Game Guard. Rapidly attaining a senior position, Jackson was hailed as a devoted wildlife champion. Jackson joined the Namibian Lion Trust in 2016, recognizing the need for sound research, community support and the further development of tried-and-tested mitigation options to the ever-present, farmer-lion conflict. A farmer in his own right, Jackson understands and promotes co-existence within farming communities, emphasizing the necessity for improved livestock management to reduce the retaliatory killing of predators. October 2023, Jackson's dedication and extended workhours was recognized during the Annual Lion Ranger Awards Ceremony:

Category: Top Performing Rapid Response Member: Jackson Kavetu.

Namibian Lion Trust - Ehi-Rovipuka Conservancy: Jackson has shown continued dedication since the start of the Lion Rangers program. One of the first Community Game Guards to be appointed in his Conservancy, Jackson has since moved on to becoming a Rapid Response leader and has single-handedly covered the entire Ombonde landscape over the last few months, responding to conflict, transporting Rangers from their homes to their patrol bases and back, and supporting teams stationed at various bases including Ossevlakte, Ondjuira, Ounguindi, Palmfontein, and Otjomapenda. Between 21 October 2022 and September 2023, Jackson covered a total of 31,281 km. During this same period, Jackson received 261 notifications and replied to 92%, responding to 90% of all conflict notifications he received (Courtesy Lion Ranger Manager, Mathilde Brassine)

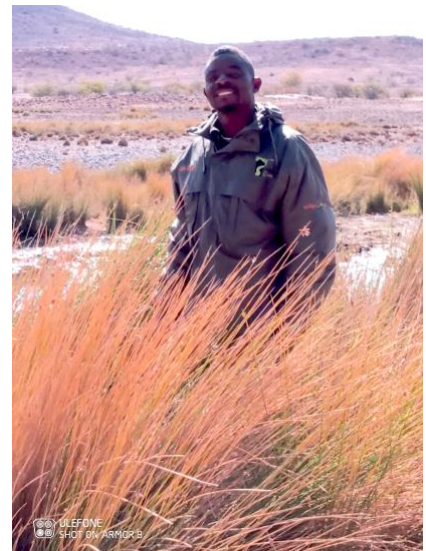
NLT Lion Guard, Rinoveni Tjauira, was awarded First Place: Top performing Lion Ranger 2023

Namibian Lion Trust - Omatendeka Conservancy: Rinoveni has shown incredible dedication and improvement over the last year, moving from 13th place in 2022 to 1st place in 2023. He has surpassed expectations this year, patrolling up to 47km on foot per day, covering over 800km in June and over 700km each month in July and August 2023! Between 21 October 2022 and 20 September 2023, Rinoveni covered a total of 4,887 km on foot, spending 1,297 active hours over 290 patrols, representing an average of 17km per patrol. Rinoveni is known among the Rangers as quiet and friendly, always ready to patrol alone or as part of a team. It is a great testament to his dedication and abilities that many of his fellow rangers consider Rinoveni capable of covering a more than 100 km² portion of his conservancy entirely on his own. (Courtesy Lion Ranger Manager, Mathilde Brassine)



Fig 2, left: Jackson Kavetu tracking collared lion to establish collar tightness and general health.

Fig 3, right: Rinoveni Tjauira on patrol, essential 'boots-on-the-ground' to establish lion locations in relation to villages and livestock herds. Lion Rangers also monitor evidence of wildlife crime.



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First Responder Activities

The Lion Rangers form Rapid Response Units (RRU) when required, with the driver of the RR Vehicle taking the responsibility of First Responder. Calls for assistance from farmers in conflict with predators, or for urgent support from the Lion Rangers in the field, are communicated to the First Responder either through sms or Whatsapp, with lion locations provided by the 'Rover' when prompted; urgent messages may also be sent/received via the 'Rover'. Every 14-20 days, teams of Lion Rangers from the 11 lion-range Conservancies, are deployed to permanent camps in known conflict zones or on an ad-hoc basis, where lion prides, small groups or individuals are threatened by farming communities. GPS-Satellite collars provide 2-hourly fixes that enable the development of conflict mitigation strategies, with local informants providing the Lion Rangers with essential in situ intelligence. Once the Lion Rangers are in the field on foot patrols, reliable feedback on incidents, and reports on their daily activities are exported via SMART (Spatial Monitoring and Reporting Tool); in most cases, due to an insufficient number of vehicles, the Rapid Response Vehicle does not remain with the patrols but follows reports of potential incidents or threat, returning to the field teams when needed.

Jackson Kavetu's patrols cover five Conservancies to the east of the Grootberg Escarpment (see Fig.4, below: Lion Guard Zone Map), spends 28 days of every month in his RR Vehicle, oftentimes on short foot patrols with his Lion Ranger Teams, but primarily following reports of lion presence and leads on illegal activity. Unfortunately, at times, Jackson is not able to reach conflict locations soon enough, either due to delayed communication from the field, or the remoteness of the location. Three known lions have died since October 2022, two of which were poisoned, and one male's cause of death has not yet been confirmed by the Protected Resources Unit (PRU).

The Namibian Lion Trust was forced to remove both Rapid Response Vehicles from the field: the rugged terrain of Namibia's northwest had taken its toll on the Nissan pick-up framework, with repeated repairs to multiple cracks, unsustainable; in November 2022, the Nissan pick-up, driven by NLT's 2nd First Responder, was taken out of circulation (190,000 kms). September 2023 (350,000 kms), the Toyota Hilux came to a standstill and requires a new engine as well as body-work repairs, a costly option which we turned down. Sourcing replacement vehicles has proven futile, but private vehicles were introduced on a short-term basis, in order to continue Lion monitoring and Rapid Response activities; in so doing, despite the vehicle challenges that complicated the Rapid Response activities, Jackson's range has increased considerably, covering approximately **34,185 kms** between October 2022 – November 2023.

Namibian Lion Trust's First Responder for part of Zone 4 & Zone 6, Ferdinand Tourob, has made use of his personal vehicle since his employment in January 2023, covering approx. **8,648 kms**. His monitoring and patrol activities have been hampered by the lack of a 4x4 vehicle, limiting his range, and restrictions placed on his activities by the #Khoadi //Hoas Committee.

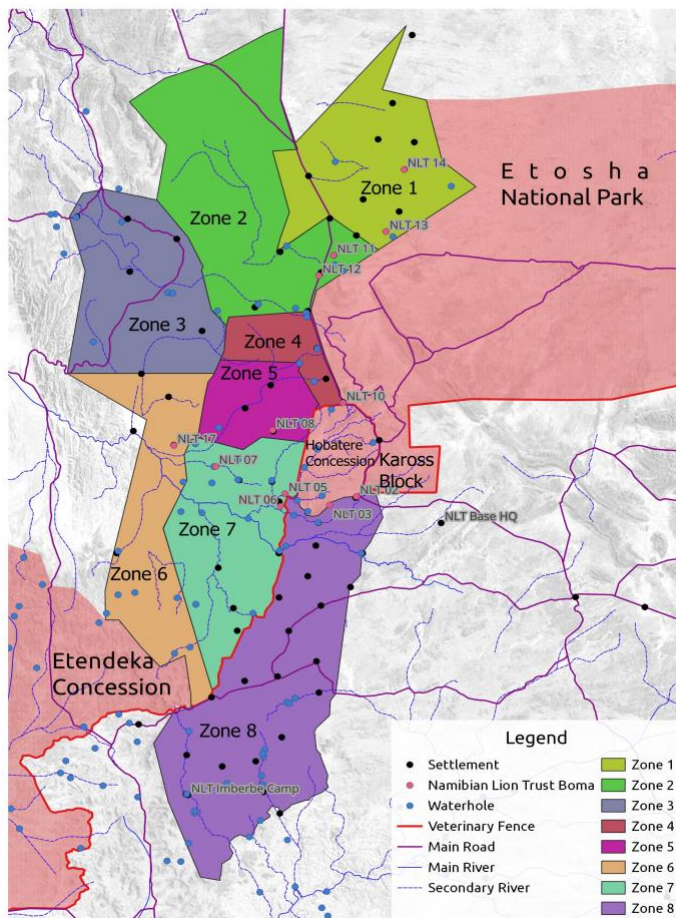


Fig.4. left: Lion Guard Zone Map. Namibian Lion Trust Lion Guards monitor lion range on communal farmland west of the Etosha NP and east of the Grootberg Escarpment. The reference numbers NLT 1-15 indicate NLT communal, predator-proof Bomas. As First Responders, Jackson covers all Zones, except Zone 8 & Ferdinand Tourob attends to part of Zone 8 and Zone 7.

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Human-Wildlife Conflict Mitigation & Community Support - Lion Ranger & First Responder Patrols: the Lion Guards contribute towards greater understanding and acceptance of wildlife. By providing guidance and encouragement, they help the farming community to adopt our Livestock Protection Programme, which includes employing herdsmen and protecting their livestock at night in predator-proof 'bomas'; they monitor the whereabouts of both collared and uncollared lion in order to establish movement patterns and, together with the data retrieved from the widely dispersed trail cameras within their area and lion-sightings by community members, the Lion Guards are able to forewarn farmers who live in conflict zones ('hot-spots'); when the Early-Warning System (EWS) detects lion movement or when an incident is reported, the Lion Guards (who form the Rapid Response Unit) move out to support the affected farmer or community as well as to protect the lion; Trained in the use of SMART (Spatial Monitoring & Reporting Tool), the collection and evaluation of valuable information on lion whereabouts, livestock management as well as lion and livestock mortalities, provides for reliable reporting and assessment.

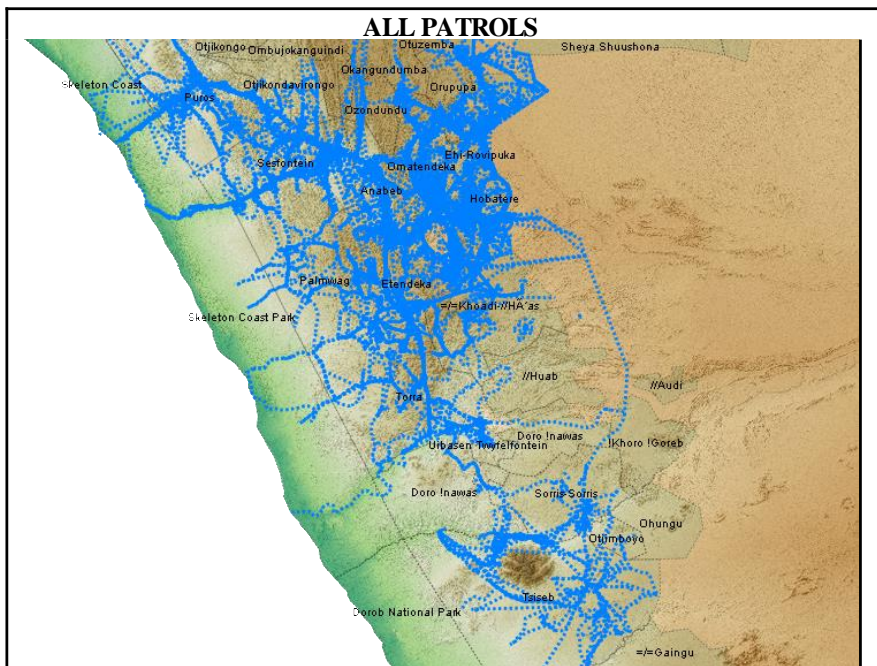


Fig.5, left: The blue dots indicate routes covered by the 47 Kunene Lion Rangers, of which twelve are employed by the Namibian Lion Trust, from 21 October 2022 – 20 September 2023 (ref.Lion Ranger SMART)



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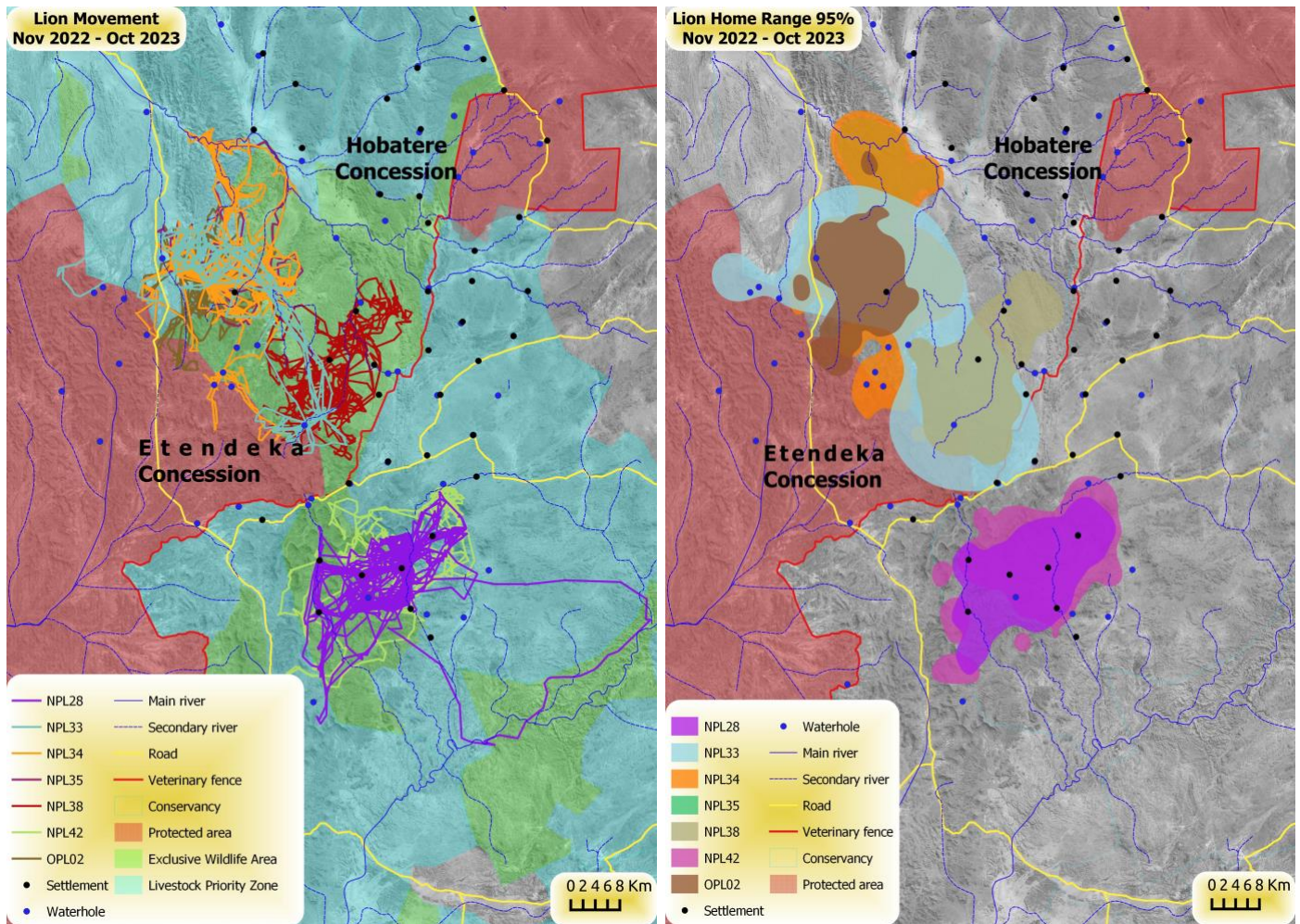
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Early-Warning via GPS-Satellite collars

A number of lion have been collared by MEFT, Desert Lion Project and Namibian Lion Trust. The use of GPS-Satellite collars enables real-time locations within the joint study area, that stretches across the eleven Lion Range Conservancies of the northwest. Recently, lion have been hot-branded in order to monitor and identify individuals in the long-term, also should the collars become defunct, lost or removed. The NLT collared lions are regularly tracked as well as their locations downloaded to the NLT office every 2 hours. A reading for each lion is taken daily at 07h00, 16h00 and at 20h00, the relevant information communicated to Jackson and Ferdinand, NLT's second First Responder, when necessary.

Fig.6a. below left: Line map indicating movement of 7 lion (November 2022 – October 2023), with Jackson's patrols indicated in Fig. 5b, coinciding with recorded lion range. **Fig. 6b. Below right:** 95% Kernel Density estimate of Home Range sizes of 7 lion (November 2022 – October 2023).



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Collaring Activities: During 2022, extended visits to the Klip & Nuchas River Systems revealed the presence of a group of 6 sub-Adults (3 males and 3 females), two adult lionesses and one resident male. October 2022, the adult male and one sub-adult female of approx. 3.5 years of age, were collared in the Klip and Nuchas Rivers, respectively. One adult female with three small cubs, were briefly observed in the Nuchas River, but were not seen again thereafter. During April 2023, the male collar was replaced; subsequent attempts during June and November 2023, to replace the female collar and to fit collars on her siblings and mother, proved unsuccessful due to a number of factors: the lions residing in these river systems are exceptionally skittish – which of course minimizes the dangers of habituation to humans – as few vehicles/patrols traverse this core wildlife area; calling stations (prey stress-calls) have proven to have the opposite effect on these females and once at the station, the male tends to dominate the bait, allowing for minimal opportunity to immobilize the females. In addition, the Khoa di Conservancy placed restrictions on our activities due to delays in finalizing the Memorandum of Agreement, hampering effective monitoring and collaring efforts. **Fig.7a. below left:** Npl-28 dentition; **Fig.7b. below centre:** Khoa di Hoas Conservancy Game Guard & NLT Lion Guard, Gregorius, assisted the NLT Team during the immobilization, a first-time experience for our youngest Lion Guard. **Fig. 7c. below right:** Wildlife Veterinarian, Dr Diethardt Rodenwoldt, monitoring Npl-42 during her immobilization.



Mobile Bomas: Livestock Protection 'Mobile' Bomas enable the Namibian Lion Trust to support conscientious farmers, specifically those who practice sound livestock management, with the means to protect their livestock whilst in the field. During the lengthy drought (2013-2021), these mobile bomas proved to be a valuable protection method when animals are forced to find the last graze & browse far away from their homesteads, where stationary 'bomas' protect the herds at night. Good rains fell during the 2021/2022 wet season, dropping way below average over the 2022/2023 season; however, due to low wildlife numbers in these areas, esp Hartmanns Zebra and Oryx, the availability of graze/browse from the previous year has enabled domestic stock to remain closer to the villages, the majority returning to safety before nightfall. Thus, the need for Mobile Bomas during 2023 was not as high as in previous years.

Fig 8a-d, below: left to right: Lion Guard erecting 'mobile' boma, cattle protected at night, effective mobile-boma for small stock.



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Fig.9a & b: PersianerPos farmers receive boma material, donated by Mike & Kate Alison. Lion migrate from protected areas onto farmland in search of easy-prey. Predator-proof Bomas help minimize predation, thereby increasing tolerance of wildlife.



Community Meetings: Due to lack of funding for this specific purpose, NLT has been unable to hold as many community, information-disseminating gatherings, as desired; however, Jackson Kavetu, in his role as First Responder, has arranged approximately 39 Community Meetings with farmers within this landscape. His primary responsibility is to respond to alerts and calls for assistance in mitigating farmer-lion conflict. **Fig 9a-c, below: The following farming areas have been attended to: Arizona, Enduu, Outokotorua, Okamboora, Onrognurru, Otjipenne, Omusema and Kamdescha.**



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Conservation Education: celebrating the Namibian Lion Trust's 'FOR OUR FUTURE'

The Onguta 'Lion Friendly' Primary School (built by NLT in 2019), provides pre- and lower Primary Education (grades 0 – 3) for approximately 50 children from the Onguta Village and surrounding farming areas. The small yet dedicated Onguta community are proud of their school; at first, mobile tented classrooms and since 2019, a permanent structure built from shipping containers. As per request by the students, the walls have been decorated by Namibian Lion Trust - Kephass Muzuma Wildlife Club members. When the Onguta learners have completed their pre-Primary education, many then attend the Kephass Muzuma Combined School, located in Otjokovare town, approx. 30 kms away. **Fig.10 a & b, below left and right: Artists at work on the Onguta School walls.**



The Onguta Pre & Lower Primary School in the Ehirovipuka Conservancy, forms part of the Ondao Mobile School system managed from Opuwo. The Namibian Lion Trust, kindly supported by AfriCat Namibia, AfriCat UK, Ms Lia Spitters of Stichting SPOTS, Netherlands, Avril Payment Solution, Namibia, Cowboys, Swakopmund and many others, are proud of the children and the Onguta Community's pledge to Protect the Lions that roam their wilderness.



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Namibian Lion Trust Wildlife Clubs: The Kephaz Muzuma Wildlife Club (KMWC), located in Otjokovare town, have taken on the responsibility of the school garden. This group of enthusiastic students braved the November heat to plant trees and prepare seed beds for vegetables, in the hope that the summer rains will fall before the end of the year. **Fig. 11 a & b, below left and right: The KMWC preparing the school garden.**



Special thanks to our dedicated supporters, including Lion Recovery Fund, Ultimate Safaris, kFW Investment Bank, Stichting SPOTS, Netherlands, Ministry of Environment, Forestry & Tourism, Namibian Chamber of Environment, Kevin Richardson Foundation, Blair Drummond Safari Park, TOSCO, AfriCat UK, AfriCat America, Wecke&Voigts & Maerua SuperSpa, Okonjima Lodge.

Report compiled by Tammy Hoth-Hanssen



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