

LION RANGERS

Supporting Communities • Conserving Lions



2021 Annual Report

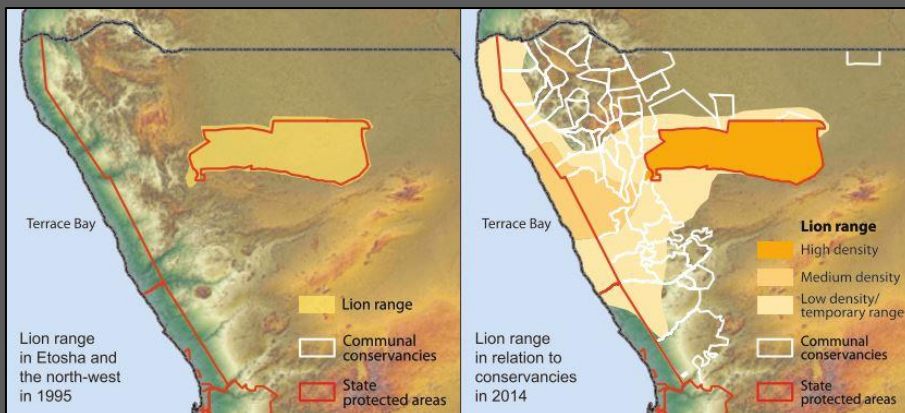
Summary



What a year! 2021 saw enormous growth in the Lion Ranger program. As the world recovers from COVID-19 lockdowns, challenges stemming from lack of tourism incomes are facing northwest Namibia. The Lion Rangers are central to ensuring the wellbeing of communal farmers in Kunene. With financial support from the IUCN, the National Geographic Society, Oliver Adolph and Family, the Community Conservation Fund of Namibia, as well as a variety of local organizations supporting our field equipment, we are better able to proactively address human-lion conflict. This support is matched by great enthusiasm from local communities. Now covering eleven communal conservancies, encompassing ~28,000 km², the program encompasses all core lion-range in northwest Namibia. This year has also seen an upscaling in our research: primarily through intensive collaring and camera-trapping. In partnership with MEFT and other stakeholders, we contributed to the Rapid Body Condition Assessment of the lions in Kunene. This serves as the background for the first ever Northwest Lion Population Survey, to be completed in 2022. Finally, training continues: field capacity is being substantively enhanced by use of the Spatial Monitoring and Reporting Tool (SMART). More information about the program is available at lionrangers.org. Check out the Lion Ranger Instagram (@lionrangers) for updates.

Background

The Kunene Region of northwest Namibia supports a population of desert-adapted lions inhabiting unfenced landscapes. It is among the few places where human land-use and positive lion conservation outcomes align. Namibia has received international recognition for successful conservation leading to significant wildlife increases, especially in arid areas. However, new challenges have arisen: the success of community-based natural resource management (CBNRM) has led to intensified human-lion conflict across northwest Namibia.



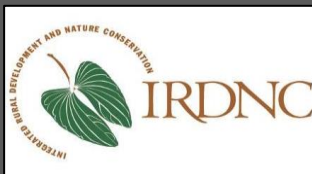
Historically lions occurred throughout northern Namibia, but autocratic apartheid politics, land reform, and the growth of agriculture since the 1970s, caused a population crash. From a low of approximately 20 individuals in 1997, to an estimated 112-139 lions in 2018, desert-adapted lions have made a remarkable recovery. This effort has been spearheaded by conservationists, government officials, and local communities working together.

Corresponding to their population's recovery, lion range has grown: from roughly 7,000 km² to roughly 40,000 km². This expanded range falls primarily within communal conservancies. Increased overlap between lion home range and communal farmers is generating a high frequency of human-lion conflict. When conservancy residents lose livestock to lions, so-called 'problem lions' are often destroyed, as is a Namibian's right under law. Retaliatory killings are the single biggest threat to the desert-adapted lion population. Since 2000, 89% of recorded desert-adapted lion (non-cub) mortalities have followed human-lion conflict incidents.

Organization



The **Lion Ranger program** unifies community, government, and non-governmental stakeholders around the shared goal of communities sustainably managing human-lion conflict in northwest Namibia. The program unifies the efforts of the Namibia Ministry of Environment, Forestry and Tourism (MEFT), Tourism Supporting Conservation (TOSCO), the Namibian Lion Trust, Integrated Rural Development and Nature Conservation (IRDNC), Desert Lion Conservation Trust, and the University of Minnesota Lion Center and incorporates staff from core lion-range communal conservancies. The Lion Rangers are conservancy employees receiving specialized training and equipment to lead efforts in combating conflict between humans and lions and perform lion monitoring on communal land.



Mission

The **Lion Ranger program goal** is the evidence-based, sustainable management of human-lion conflict by communities in Kunene to ensure continued lion survival and community benefit. The number one threat to desert-adapted lions is retaliation following human-lion conflict. The Lion Ranger program aims to reduce conflict and increase the flow of benefits to communities.

Conservation Strategy

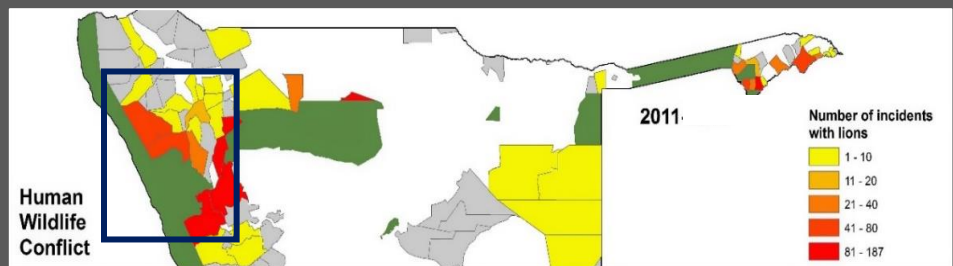


The program seeks to sustainably conserve desert-adapted lions by limiting conflict between lions and rural communities and building predator monitoring capacities. Sustainable lion conservation in northwest Namibia must be founded upon the support and direction of local communities. The Lion Ranger program supports communal conservancies through collaboration and capacity-building projects based on community needs. Our approach brings together cutting-edge research and technology, conflict response team deployment, and emphasizing active herding to provide multiple means for limiting human-lion conflict. Capacity development emphasizes skills training

and improved information-sharing among stakeholders. Ranger deployment emphasizes fostering strong relationships with farmers and collecting standardized and quantitatively robust data for minimizing human-lion conflict.

Geographic Focus

The Kunene Region is large (115,260 km²), sparsely populated (~1.3 people/km²), and arid to semi-arid (100-250 mm/yr.) with highly variable rainfall. In 2017, MEFT identified four focal lion range conservancies (Anabeb, Puros, Sesfontein, and Torra) where human-lion conflict most needed intervention. An additional five conservancies (Ehivipuka, ǀKhoadi-//Hôas, Omatendeka, Sorris Sorris, and Tsiseb) joined the Lion Ranger program in early 2019, and a further two (Orupupa and Doro !Nawas) were added in 2021.



Because lion movement and human settlement is highly spatially-differentiated over this large area (~28,000 km²), human-lion conflict is unevenly distributed. Spatial analysis of lion movements and of existing farms highlights areas of greatest human-lion conflict risk. This analysis is reinforced by community surveys identifying areas of greatest lion problems. This multi-method approach identified three-to-four initial human-lion conflict ‘hotspots’ within each conservancy. As lion and livestock movements change, so to do Rangers’ areas of operation. Lion Rangers focus monitoring within hotspots, while communicating with farmers across their conservancy. Additionally, the Lion Rangers assist with lion-focused research across the entire lion range.

CONFLICT SITE SELECTION CRITERIA

- ❖ **High frequency of lion presence** – is a site frequently visited by multiple groups of lions?
- ❖ **Critical density of farming** – are farmers and livestock present in relatively high numbers?
- ❖ **High need identified by multiple methods** – do scientific monitoring and community surveys both indicate certain areas?
- ❖ **Community demand** – is there demand and willingness from a conservancy to work in partnership?

2021 Highlights

- ❖ In January we completed construction of the Ombonde Research and Monitoring Camp (ORMC). Situated at the border of Ehi-rovipuka's core wildlife area, the ORMC is a home base for the Lion Rangers performing joint patrols in Ehi-rovipuka, Omatendeka, and Orupupa, where lion conflict numbers are highest in Kunene. Thanks to CCFN for supporting camp construction.
- ❖ In January Program Research Leader Dr. John Heydinger was published in the journal *Environment and History*. During the year, his research, focusing on human-lion conflict, was also published in *South African Historical Journal*, and the *African Studies Review*. Publications are available at lionrangers.org/on-going-project/
- ❖ From January to April, the Lion Rangers intensively monitored four subadult lions and two older females in the Huab catchment area of Torra and Doro !Nawas. Each of these lions were collared by Desert Lion Conservation. Due to persistent drought and subsequent lack of available prey, these lions were considered a high conflict risk. This challenging work concluded in May when MEFT decided for both groups to be removed. However, important community goodwill was built during this period and no records of human-lion conflict have since been recorded in the area.
- ❖ In February we welcomed TOSCO's Mathilde Brassine as a full-time Program Administrator and part of the Program Leadership Team. Ms. Brassine has extensive experience in wildlife conservation in northwest Namibia and is overseeing the development and implementation of the SMART program for the Lion Rangers.
- ❖ In February and September, we had full team training at World's End Environmental Center. February training focused on incident response, using an ongoing conflict to build our skills. September training focused on Basic First Aid; each Ranger successfully completed course modules and earned a certificate. Additionally, September training introduced the cloud-based SMART tool, which the Rangers are using to collect field data across Kunene.



- ✿ In May, MEFT commissioned a rapid assessment of the status and condition of the desert-adapted lion population. Teams of Lion Rangers spearheaded work in Anabeb, Omatendeka, Sesfontein, and Torra Conservancies, as well as Etendeka Concession, as these areas were considered most affected by recent drought. While lions furthest west were struggling, the state of the population is strong, with many groups having healthy young cubs.
- ✿ From April we began an intensive collaring push that lasted throughout the year. During 2021 alone, the Lion Rangers, working closely with MEFT, collared eighteen lions across the landscape.
- ✿ From late May we began an intensive camera trapping program within core areas of the Ombonde Research Landscape. This research focuses on identifying individuals and groups of lions, for limiting conflict. Furthermore, it focuses on carnivore land-use overlap, to better assess the spatial distribution of Kunene's carnivore guild. To date cameras have been deployed for more than 8,000 'camera nights' and recorded more than 30,000 focal species photos. This research is being supported by CCFN.
- ✿ Under the leadership of MEFT, the Lion Rangers began assisting with lion collaring for conflict monitoring within the Hobatere Concession. Situated between Etosha National Park and important communal farming areas, Hobatere has long been a source of lions in Kunene, and therefore an important place to emphasize collaring. Program Operations Leader Uakendisa Muzuma has since overseen seventeen collarings in Hobatere. We appreciate the increased trust of MEFT to help them monitor lions within this concession.
- ✿ Unfortunately, human-lion conflict continues to be a challenge with Kunene. During the year at least three lions were killed following conflict incidents. Working with Namibian police and MEFT Anti-Poaching Unit, the Lion Rangers assisted in collecting evidence to support cases being brought in the cases of illegal lion killing. In 2022 the Lion Rangers are receiving MEFT training in Law Enforcement assistance, to increase their effectiveness in addressing wildlife crime.
- ✿ During 2021, the Lion Rangers and their program partners completed the construction of more than 40 'lion-proof' livestock enclosures across the landscape. These are helping limit conflict, and critically building community support for the program and living with lions.



2022 Priorities

- ❖ Follow-up social surveys of ~340 households in Lion Ranger conservancies to assess program efficacy are being completed
- ❖ Construction of a further 20 'lion-proof' livestock enclosures emphasizing newly identified conflict hotspots in Anabeb, Puros, and Omatendeka conservancies
- ❖ Continued deployment of ~100 trail cameras in the Ombonde catchment emphasizing core wildlife areas within Omatendeka as well as the Hobatere Tourism Concession
- ❖ Replacing inactive or malfunctioning collars to continue limiting human-lion conflict
- ❖ Landscape-wide implementation of the SMART program to upscale the efficacy of Ranger data collection
- ❖ First ever Northwest Lion Population Survey to be completed by the end of 2022
- ❖ Ranger capacity-development through law enforcement and life-skills training

Upcoming

In 2022 the Lion Ranger program will continue emphasizing training, deployment, and robust scientific data collection. While human-lion conflict continues to be a pressing issue, we have made great strides and conflict numbers are declining. Small-group and field-based trainings are increasingly part of developing Ranger field skills and capacities. We are also pioneering new research including an innovative lion collaring program in partnership with the Max Planck Institute of Animal Behaviour. Partnering with MEFT, we continue working to integrate stronger evidence-based monitoring into proactive conflict interventions. We are also looking forward to forging new partnerships, including with local and international conservation organizations. Program updates can be found online at lionrangers.org or at the Lion Ranger Instagram: @lionrangers.

Supporters

Our success is possible because of the support we receive. Thank you to our supporters!



Oliver Adolph & Family



Lions near Ombonde



Trail cameras



At training

Wild creatures can thrive with humanity's care and aid. A world in which humans and lions coexist is desirable, possible, and necessary. Lion Rangers are securing a brighter future for humans and desert-adapted lions. Thank you for being an important part of our team!

Lion Rangers with their Law Enforcement Training Certificates, 2022

