



LION GUARDIANS

ANNUAL REPORT 2009

Leela Hazzah – Director Philip Briggs – Project Manager Amy Howard – Media Manager

Antony Kasanga – Coordinator, Mbirikani Group Ranch

Stephanie Dolrenry – Lion Biologist and Field Methodologist

Eric Ole Kesoi – Coordinator, Eselenkei & Olgulului Group Ranches



Photo by S. Dolrenry



Photo by S. Maclennan

Contents

1. General Summary	1
2. Background	2
3. The Lion Guardian Mission.....	2
4. Expansion to Eselenkei and Olgulului Group Ranches	4
5. The Lion Guardians	6
6. New Scientific Data Collection	7
7. Monitoring Lions and Other Carnivores.....	8
8. Conflict, Community and Coexistence.	9
9. Lion Guardian Games and Awards ...	12
10. The Lion Guardian blog	13
11. Media	13
12. Looking Ahead... ..	15
13. Acknowledgements	16



1. Executive Summary

This year, Kenya experienced one of the worst droughts in decades, if not in the last century. The Lion Guardian project worked to expand its efforts to give immediate benefits to communities during this difficult time, while also increasing the areas in which the Guardians monitor and protect the lions of the Amboseli ecosystem. The Lion Guardian project on Mbirikani Group Ranch has just completed its third year; with a successful foundation established, the Lion Guardian project expanded its work to two additional group ranches in the Amboseli ecosystem: Olgulului Group Ranch and Eselenkei Group Ranch. There are now 23 Lion Guardians working over 1700km², monitoring lions and helping to mitigate conflict within their community. Also, the project has greatly improved the data collection system--creating clearer forms that are accompanied by spoor guides which ensure that data collection is more accurate. Another major development is that the Lion Guardians are now conducting spoor counts twice a week in their selected zones. These spoor counts will provide key ecological data on relative abundance and densities of all major predators and their primary prey species. In general, the Lion Guardian project is moving toward more non-invasive techniques to monitor lions in the ecosystem, through spoor counting, traditional track logging, and collection of lion hair and scat for DNA analysis. Our hope is that by July 2010, we will expand the project once again to southern Olgulului, an area where lion killing was rampant in the past and where communities are requesting the Lion Guardian project to commence.



Photo by: P. Briggs



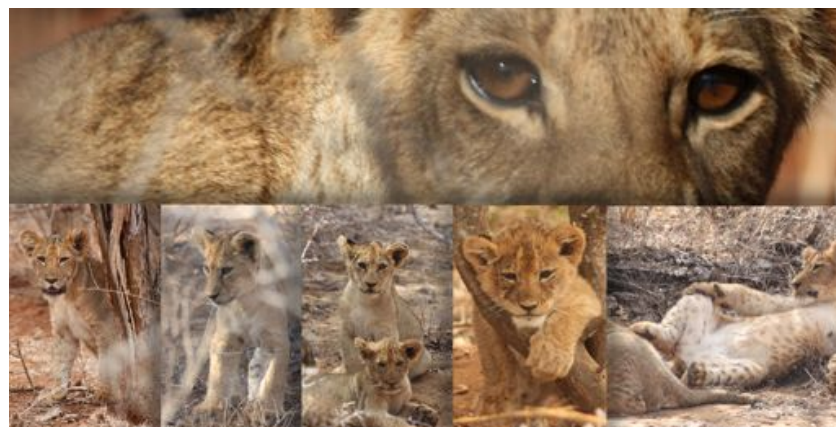
2. Background

For centuries, Maasai warriors have hunted and revered the lions which roam the rangelands of East Africa and stalk their beloved cattle. In recent time, due to a multitude of factors, the lion populations of Kenya are nearing extirpation. Immediate action was needed to not only protect the remaining lions, but to also bring benefits to those who live amongst them. The Lion Guardian project was initiated in early 2007 under the umbrella of the Living with Lions project, to give the Maasai people, particularly the warrior age set, benefits from sharing their land with lions. Lion Guardians currently work on three group ranches in the heart of the Amboseli ecosystem; because people and livestock are living alongside wildlife, conflict is inevitable. The Lion Guardian project, in collaboration with several other organizations, is working toward a shared goal of coexistence between lions and local communities.

Across the Amboseli ecosystem, there are a myriad of different conservation actions to attempt to halt lion killing and subsequently increase the remaining lion population. In 2003, the Maasailand Preservation Trust (MPT) initiated the Predator Compensation Fund (PCF) on Mbirikani to increase local tolerance to livestock kills by predator. This program was then expanded to Olgulului in August 2008. As well as predator compensation, MPT runs education and healthcare programs, employs community game scouts to combat game meat poaching and resolve human wildlife conflict, and are monitoring the highly endangered black rhino.

On Eselenkei, Porini Ecotourism has a wildlife conservancy (Selenkay Conservancy) staffed with a Warden and Game Scouts, and has aided the community through numerous employment opportunities and other benefits. It is a great example of a partnership between a private investor and local communities. Since its inception over 10 years ago, the Selenkay Conservancy has offered a safe haven for wildlife, which has resulted in increased populations of herbivores, and has also seen the return of species, including elephants, which had previously been absent for over 20 years. Porini, working in conjunction with the community, are helping to preserve biodiversity in this area.

Today, all of these conservation efforts, including Lion Guardians, are working together to conserve lions and other key wildlife species and habitats across the ecosystem. Our joint effort and close collaboration will enable us to truly reach our conservation goals.



Photos by S. Dolrenny



3. The Lion Guardians Mission

Mission: To promote and sustain coexistence between people & wildlife through ecological monitoring and local capacity building		
Objective 1 - To conserve carnivores by using local people		
<i>Aims</i>	<i>Methods (current and future)</i>	<i>Measures of Success</i>
<p>To stop lion killing, specifically targeting three types of killing:</p> <ul style="list-style-type: none"> • <i>Olkiyioi</i> - retaliatory killings • <i>Olamayio</i> – traditional rite of passage killings • Age-set protest killings 	<ul style="list-style-type: none"> • Lion Guardians attend all warrior meetings and ceremonies where lion killing may be discussed. They convince other warriors that lion killing is no longer a viable option • Lion Guardians are trained on community negotiations through role play • Lion Guardians are well known and respected in their communities so can easily dissuade other warriors from lion killing 	<ul style="list-style-type: none"> • Number of lions killed (our target is 0) • Number of lion hunts stopped
<p>To understand the movements and population change of carnivores in order to:</p> <ul style="list-style-type: none"> • predict and mitigate conflict • enhance ongoing research 	<ul style="list-style-type: none"> • Use of data forms, traditional tracking and telemetry of collared lions • Collection of GPS data, lion hair and scat for DNA analysis • Spoor counts twice a week using two different routes 	<ul style="list-style-type: none"> • Correlation between Lion Guardians’ GPS points and GPS lion collar data in order to verify accuracy of data collected • Small margin of error during double blind spoor count tests of Lion Guardians
<p>Mitigate conflict and increase local tolerance (prevention strategies).</p>	<ul style="list-style-type: none"> • Reinforcing bad <i>bomas</i> to safeguard livestock, with the help of a <i>boma</i> member • Select hostile <i>bomas</i> – those with a higher propensity to kill carnivores or retaliate after an attack. • Lion Guardians find and return lost livestock to owners • Informing herders of nearby carnivores • Lion Guardians name local lions in their areas, which provides a sense of ownership and increased tolerance by the local communities 	<ul style="list-style-type: none"> • Depredation rates at <i>bomas</i> that were reinforced (our target is 0 hits) • High ratio of livestock found to livestock lost, high number <i>bomas</i> reinforced and herders informed. • Number of lions killed (our target is 0)



Objective 2 - Build up capacity for future conservationists to conserve carnivores		
<i>Aims</i>	<i>Methods (current and future)</i>	<i>Measures of Success</i>
<p>To ensure the sustainability of the Lion Guardians project and wildlife in conservation in Kenya in the long term</p>	<ul style="list-style-type: none"> • Proposal writing and blog writing by local coordinators to ensure financial sustainability • Workshops and training sessions run by coordinators for Lion Guardians on all aspects of their work and wildlife conservation • Lectures and film showings by coordinators on wildlife, conservation and ecology for communities • Exchange of Lion Guardians and coordinators between similar projects in East Africa • Providing training and support for higher educational opportunities for coordinators 	<ul style="list-style-type: none"> • Local staff are able to secure funds for the project through blog, grants and media opportunities • Increased capacity of Maasai to run conservation projects • Long term tolerance of wildlife by impacted Maasai communities • Increased educational opportunities and attendance of national and international meetings and workshops for Lion Guardians staff

4. Expansion to Eselenkei and Olgulului Group Ranches

This year the Lion Guardians project expanded from Mbirikani group ranch (1,229 km²) to two additional group ranches in the Amboseli ecosystem – Eselenkei (748 km²) and Olgulului (1,471 km²), where human carnivore conflict is high and where in the past, lion killing was unbridled. Our goal is to collaborate closely with existing conservation partners in the new areas so as to combine our efforts to protect the remaining lions in the ecosystem. The group ranches where Lion Guardians operate, as well as the protected areas they surround are shown in Figure 1.

With the generous support of many players the new Lion Guardian research camp is now close to completion; Panthera provided the financial support, Porini Ecotourism generously allowed us to construct the camp on part of the Conservancy’s land and provides us with water. Justin Downs of GRND Labs (www.grndlab.com) and Todd Oliver of TJames Construction (www.tjames-construction.com) donated their time and effort to the building and solar energy supply of our camp.

In February, Philip Briggs joined the team primarily to help in the expansion of the Lion Guardian project to the new areas, which more than doubled its original size. He spent the year training and managing the new Lion Guardians. Philip also created new data collection forms and implemented new methodologies across all three group ranches to ensure a systematic and rigorous approach to Lion Guardian activities. Philip's assistance and creative insight has been invaluable during this expansion period. Kylie McQualter jointed the



Living with Lions project as a biologist on Mbirikani group ranch and has been an essential at working with the Lion Guardians in the field.

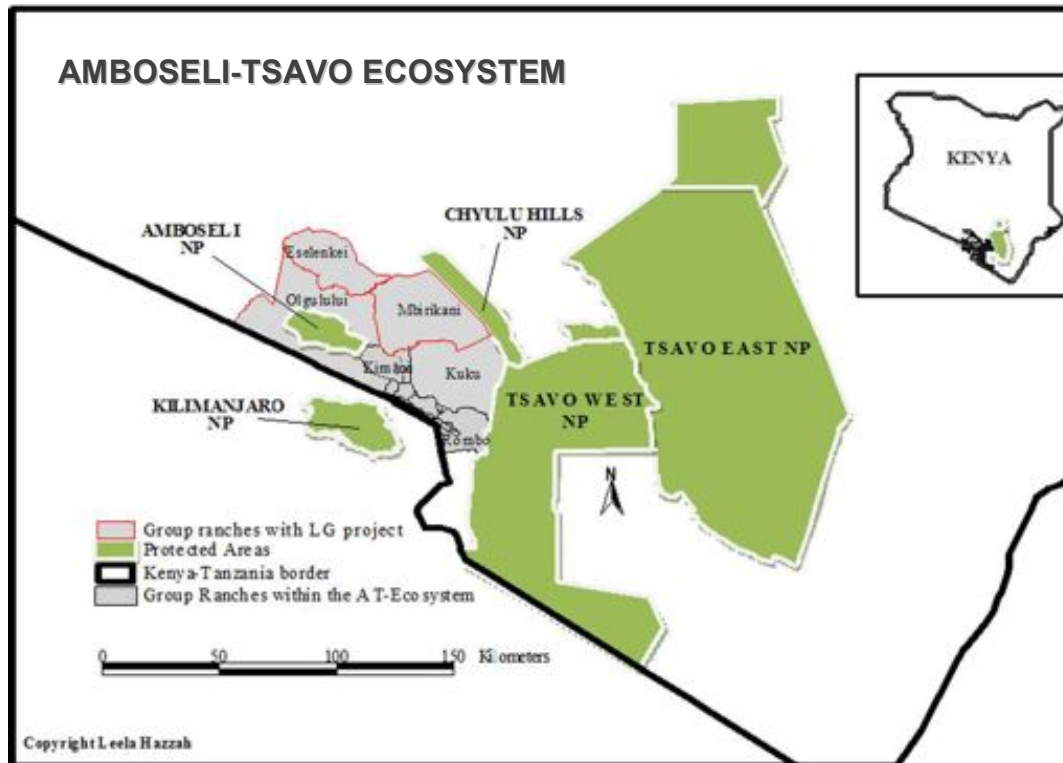


Figure 1. Map of the Amboseli-Tsavo ecosystem

From Eselenkei, Eric Ole Kesoi was hired as the Lion Guardian Coordinator for both Eselenkei and Olgulului group ranches. Eric has a college diploma in conflict mitigation and development, and a plethora of leadership experience. Eric's skills were essential during the interviewing, volunteering and training of the new Lion Guardians on Olgulului and Eselenkei group ranches. Eric is highly respected by his community and is very influential both within his group ranch and outside in the larger district.

The Lion Guardian project was introduced to the new communities through meetings, presentations and film showings. These forums were opportunities for the communities to ask specific questions about the project and provide feedback and suggestions to us. Community ideas were openly discussed and integrated into the project, through an adaptive management framework. We have been warmly welcomed by the group ranch members and leaders in all the new communities.



Photo by: P. Briggs

Coordinator Eric Ole Kesoi with the Eselenkei Lion Guardians

5. The Lion Guardians

With the expansion onto Olgulului and Eselenkei, we now have 23 Lion Guardians collecting key ecological data, and most importantly mitigating conflict in their communities, and protecting lions.

This year we hired four new Lion Guardians on Mbirikani: Mushaga in the Oltiasika area, Mingati joins Koikai in the Olibili area (the area needs two Guardians because of the large size and high conflict) and Noah and Pilenanka in Ol Donyo Wuas. Pilenanka spends approximately half his day doing Lion Guardian work and the other half working as a research assistant for Kylie McQualter, lion biologist on Mbirikani. We are very excited to welcome these new enthusiastic Lion Guardians to the Mbirikani team.

In Eselenkei, a smaller group ranch, there are four new Lion Guardians in the main communities on the ranch. One of the communities that borders Olgulului ranch was known for high rates of lion killing in the past so we decided to hire the most well-known ex-lion killer in that area, Kamunu or Meiterananga, (his lion name, meaning *“the one who is always first”*). This transition from lion killer to lion protector is the foundation of the Lion Guardian project, and Kamunu is a perfect example of how effective this strategy can be (see Box 1).



Olgulului group ranch previously had the highest number of lions killed in the ecosystem (at least until 2008 when MPT started compensation). We have hired eight Lion Guardians throughout the northern part of the ranch. All have been fully trained and are working in their zones with Eric supervising their progress.

A fantastic piece of news is that in April 2009 Antony Kasanga, our Lion Guardian Coordinator at Mbirikani, was accepted into a Postgraduate Diploma in International Wildlife Conservation Practice at the University of Oxford. This course equips local conservationists with the necessary professional and scientific skills to work in conservation in the developing world. Antony has spent eight months studying at Oxford, and we are now delighted to have him back in Mbirikani, bringing the invaluable skills he has learned back to his community and the Lion Guardians project, in order to conserve lions.

An aim of the Lion Guardians project is to improve capacity and increase educational development of local staff. In conjunction with this aim, local project staff have attended and presented at the following meetings; IUCN Human Dimension of Human Wildlife Conflict (a two day workshop, which was attended by representatives from many regions of Africa), Kenya Wildlife Service Carnivore Meeting and Amboseli Ecosystem Management plan meeting.

6. New Scientific Data Collection

The work of the Lion Guardians is comprised of carnivore monitoring and community work, both aiming to reduce human-wildlife conflict. However this year, in order to expand the data the Guardians collect, another element – spoor counting, was added to their duties. This involves each Guardian counting the spoor (tracks) of all key large carnivore species as well as the primary prey species of lions on each of two designated 6-7 km routes, once a week. Philip designed a Spoor Guide to ensure accuracy, as each Guardian must use it whenever they come across a carnivore spoor. This new data collection has been embraced by the Lion Guardians, who are excited to be able to systematically identify the large carnivore species they are living among.

The Mbirikani Lion Guardians were visited by Steven Ekwanga (from the Living with Lions - Laikipia Predator Project) and expert tracker Morani from Laikipia, who came down to the project to fine tune the skills of the Guardians in spoor identification and counting. Though counting spoor may seem like a relatively easy task, tallying up the individual numbers of animals in a herd that repeatedly cross a track requires a lot of skill!

BOX 1 – KAMUNU



Since Kamunu started work as a Lion Guardian on Eselenkei, he has stopped numerous warriors from spearing lions by explaining the opportunities that other warriors can get if they choose not to kill. When Kamunu was hired he told us about his past;

the time he was arrested for spearing a large male lion, and finally the last lion he killed—

"I was tracking my lost cows in the bush and I came across lion tracks. Immediately I knew the lions must have eaten my cows. I was very upset and wanted to kill the lion to prove to everyone that it ate my cow. Although I knew I shouldn't since I was released from jail only 3 months ago, I was angry. I followed the lion tracks until I saw a group of females...they looked fat! I hid behind a tree and once they went to sleep I speared one of them and watched it die. I took my blade and cut open the stomach to prove that my cow was indeed eaten. I was shocked. There was nothing in [her] stomach. I felt both angry and sad. From that moment on, I knew I could not kill another lion. It was a waste."

Kamunu was the first Guardian to find and assist in collaring a lion on the new project. He named her Nosieki, after the area she was found. Daily he tracks her signal ensuring that she and her two cubs are safe.



The Guardians have not only had new work introduced, but the way their lion monitoring and community work data is collected has also been improved. New forms have been introduced, and the Guardians have all been extensively trained on the new data collection system. Additionally, as we move toward more non-invasive techniques, Lion Guardians are collecting hair and scat samples of lions whenever they come across them in the field for DNA analysis. We hope to have these samples analyzed within the upcoming year at the Sackler Institute of Comparative Genomics at the American Museum of Natural History with support from Panthera.



Photo by: P. Briggs

Lion Guardian Kamunu using the Spoor Guide along his spoor counting route

Also, instead of only taking one GPS point where they identify lion tracks, they will now be GPS track logging the lions' routes as they follow them across the landscape. This information will be used by Stephanie to develop predictive models to evaluate changes in behaviour and distribution of lion populations in relation to habitat and community areas.

7. Monitoring Lions and Other Carnivores

Lions

Lion Guardians monitor lions, both by traditional tracking methods and using radio telemetry to locate collared lions. They mark all lion tracks and sightings with either a GPS point or a track log, and report any evidence to the research camps, whether it is roaring they heard in the night or a direct sighting. We use these reports to monitor lion movements, which over time will allow us to map and identify trends in distribution and use of habitat by both the lions and their prey.



On Mbirikani there is an estimated 13 lions (both collared and uncollared) that frequently use the group ranch. In 2009, the Lion Guardians detected this population a total of 621 times, through both traditional and modern tracking methods. Figure 2 illustrates the proportion of times a lion is monitored using these methods (it should be noted not every Lion Guardian conducts his daily work using a telemetry receiver). As you can see, traditional spoor detection significantly enhances the more modern technologies used to monitor and track carnivores, and supports the growing recognition of the importance of traditional knowledge in ecological monitoring.

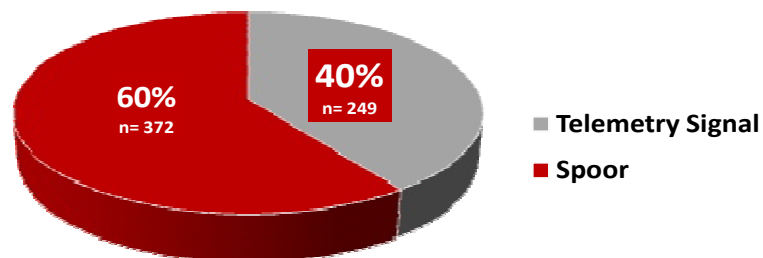


Figure 2. Lion monitoring methods on Mbirikani in 2009

Currently, the Lion Guardians are monitoring 14 collared lions in the Amboseli ecosystem. From the Lion Guardians' reports, we are able to estimate that there are approximately 21 additional uncollared adult lions and 13 cubs in these areas outside Amboseli National Park. On Mbirikani, we have eight collared lions (four females and four males). There are an additional three collared females and two collared males who commonly use various areas of all three group ranches. For example, Figure 3 below shows Selenkey, a female who was collared on Eselenkei ranch (hence her name), moves frequently over 10 Lion Guardian zones. Her movements are represented by small blue dots. This shows the importance of expanding the Lion Guardians throughout the Amboseli ecosystem—as you can see Lion Guardians are presently working in the majority of the ecosystem.

As well as monitoring the collared lions of their group ranches, the Lion Guardians also get to know and name many of the un-collared lions which frequent their areas (see Box 2).

Other Carnivores

Since September, the Guardians on Eselenkei have been tracking a growing pack of wild dogs. When the Guardians first began following them there were only six individuals, now the pack has grown to over 17. The wild dogs have occasionally been spotted on Eselenkei for many years. Recently, they killed an impala in our project's Eselenkei base camp, and have also killed over 70 head of livestock in the past three months. Lion Guardians Lopono, Kutata and Melita have been tracking them weekly trying to prevent further depredation on livestock.

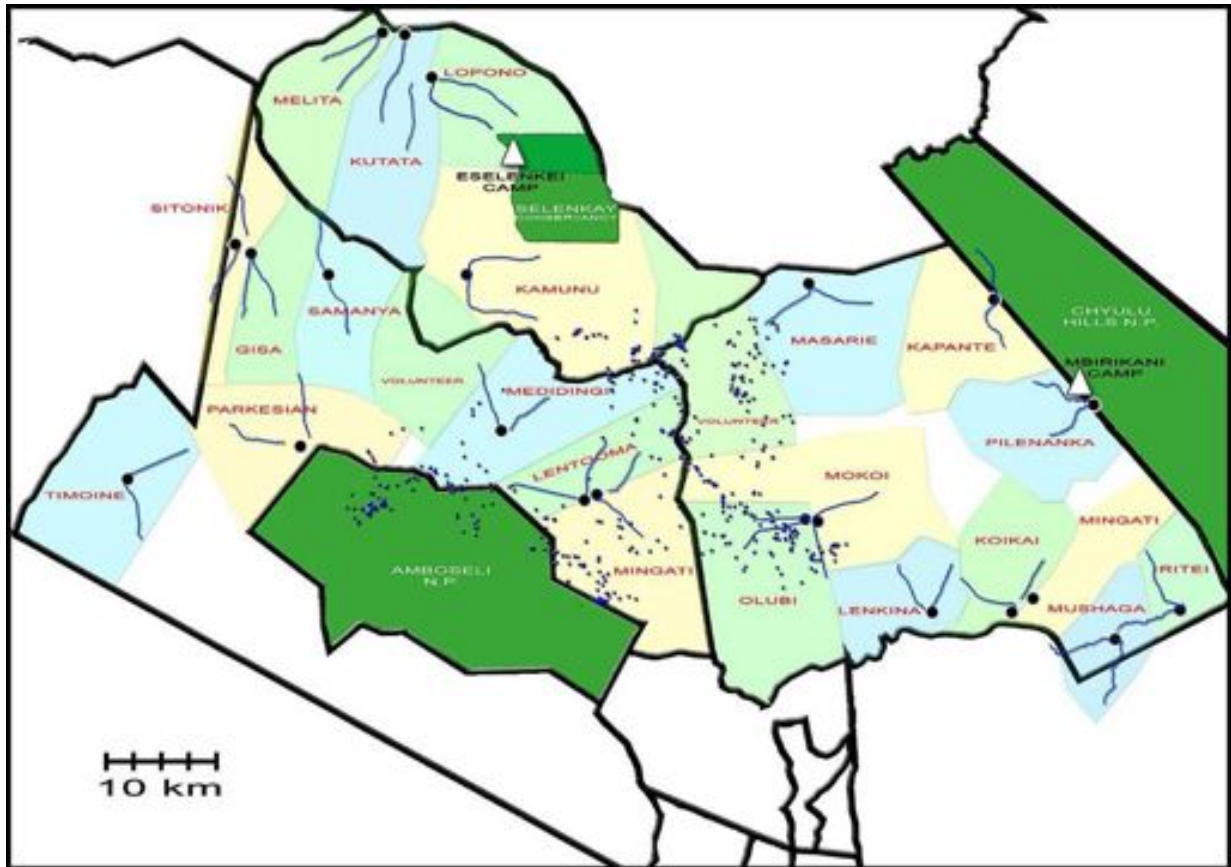


Figure 3. Map of Lion Guardian zones, including their bomas (black dots) and spoor routes (blue lines), as well as female lion Selenkay's movements (small blue dots) across the zones

8. Conflict, Community and Coexistence

When talking about conflict in the community, Eric, the Lion Guardian coordinator, always says that *"human-wildlife conflict in pastoral environments is as old as pastoralism itself"*. He is very right, and we have been working relentlessly to come up with new and innovative mitigation techniques to reduce conflict. Due to the commitment and effort of the Maasailand Preservation Trust, Porini Conservancy, the Maasai community, and the Lion Guardians project there have been **no lions killed** in the past year on Mbirikani, Olgulului or Eselenkei ranches.

There is, however, a new and increasing threat for carnivores; the illegal trade in teeth, claws or bones. In January, a dead cheetah was reported to us, which had been killed on Kimana ranch, and its paws removed, potentially to sell its claws. There has been evidence of lions killed for the same reason. We have been monitoring this trade using key informants and market surveys, and we have been working closely with a Kenyan student to begin to quantify the extent of the trade in illegal lion parts. Another worrying threat to



BOX 2 – LOMUNYAK



Lomunyak seemingly enjoys patrolling his territory and protecting his prides which include lioness Nosieki, another female called Nasieku (a Maasai name for 'she who comes first', she derives her name from the frequency in which she charges our vehicles), their 5 cubs and 3 other lionesses – Selenkay, Narika, Elikan.

wildlife, which gained publicity this year, was the use of poisons such as Furadan to kill carnivores (see Media section below for additional details).

One of the key objectives of the Lion Guardians is to help reduce conflict with carnivores within their communities. They primarily help people by reinforcing livestock enclosures (*bomas*), and finding lost livestock left out in the bush, which might otherwise be killed by carnivores. They also warn herders when lions are nearby. By lessening conflict between livestock and predators, the Lion Guardians are reducing the likelihood of retaliatory killings.

In the past year, Kenya has undergone the worst drought recorded in decades, if not a century (as stated by many Maasai elders). The ongoing drought has greatly increased the amount of lost livestock. In these harsh conditions, it is very difficult for sheep and goats to find food, so they tend to scatter and get lost more often. This has meant that a major part of the Lion Guardians' community work this year has been finding lost livestock. In November, Medidingi, Lentoma, and Lopono worked with other community members to help find 400 shoats lost from one family.

The Lion Guardian community data forms have been refined to allow us to quantify the proportion of lost livestock found. While in the past, Guardians were only recording the number of herds found. Since August with the inception of the new forms, Lion Guardians have searched for 3,156 lost livestock and have successfully returned 2,627, an 83% success rate.

This year, we held focus group meetings within Lion Guardian communities to find out which *bomas* are enduring the most conflict with carnivores (visited the most at night). This list is given to the Lion Guardian in each community and he ensures that each *boma* on the list will be reinforced to predator proof standards. Most importantly, the Lion Guardian does not work alone; he is given, from each *boma* headman, a minimum of one assistant to help with the *boma* reinforcing. This ensures that there is direct collaboration and participation from the community.

In 2009, Lion Guardians have reinforced 241 Maasai *bomas* to deter predators from entering homesteads at night. We are currently in the process of collecting depredation rates at each of the 241 *bomas* to evaluate our success rate.

Of course, however hard the Lion Guardians work, there are always occasions when livestock is left out at night, or *bomas* are just not strong enough to resist a determined carnivore. In these cases, it is the responsibility of the Lion Guardians in the area to pacify the angry livestock owners and try and persuade them that retaliation is not the answer. Recently, collared lioness Narika killed 21 shoats in one night, in Olubi and Mokoï's area of work. Responding immediately, it was their job to calm the owner and prevent the start of a lion hunt, which they carefully and sensitively managed to do. One of the new Lion Guardians in Olgulului, Samanya, heard about a donkey being killed by hyenas outside the *boma* of an elder. When he arrived at the scene the elder was heading for the bush to poison the hyenas. Samanya talked down the elder and immediately started working on reinforcing his *boma*. The elder was satisfied and returned to his



home, promising Samanya he would not retaliate. During the week of Christmas 2009, Lion Guardians have successfully talked down six hunting parties on Olgulului alone.

In September, a hunting party on Eselenkei was also stopped by the Porini Game Scouts and the Lion Guardians, after four young male lions went on a rampage, killing eight donkeys and four goats that were left in the bush. One of the males, Sikiria (meaning “*he of the donkey*”) was collared the night after and is currently being monitored by the Lion Guardians.

The Lion Guardians also help their communities with other issues when called upon to do so. Lion Guardian Melita, for example, found a child that had been lost when herding. This seems to be happening more frequently as older warriors are far away from home herding cows or attending school, thus leaving small boys (many between 5-8 years old) to herd livestock in the bush. Last year, Mokoï and Masarie in Mbirikani also found a child who got lost after searching for livestock.

9. Lion Guardian Games and Awards

To celebrate the hard work of the Lion Guardians and the success of the project, this January we hold the first ever Lion Guardian Games. This involves the coming together of all the Guardians to meet, compete and celebrate their work together. Competitions were chosen by Guardians from each group ranch in all the skills of a Maasai warrior: specifically, spear throwing, stick throwing, singing, and football.

This is not only a fun way for the Guardians to relax after a hard year of successful work, but it is also an essential component of effective ecosystem-wide conservation. Guardians on neighboring ranches must get to know each other so they can communicate about lion locations as they roam between zones and ranches.

As well as awarding prizes to the winners of the various games, we will also give awards for the best work over the year, so as to motivate the Lion Guardians for next year. These awards are:

Most improved: Awarded to Kamunu from Eselenkei & Kapande from Mbirikani

Most reliable and hardworking: Awarded to Mokoï from Mbirikani

Biggest impact on the new project: Awarded to Parkesian from Olgulului (for climbing hills at 4 am to track collared lions).



Photo by: P. Briggs

Guardian Mingati (from Olgulului) and Guardian Olubi (from Mbirikani) getting to know each other at a collaring



10. Lion Guardians blog

The Lion Guardians blog, hosted by WildlifeDirect, has now been successfully running for over two years. So far it has raised almost \$34,000 through online donations, and has also initiated fundraising events for the project - UK zoo Africa Alive made another generous donation this year of \$4,731, raised through their fundraising efforts.

Started last year, the “*Sponsor a Lion Guardian*” campaign has now been extended to Eselenkei and Olgulului group ranches and we currently have a total of seven Guardians sponsored. This sponsorship ensures that all the costs of a Guardian (wages, equipment, monthly admin costs, phone credit) are covered by a donor. Koikai’s sponsor Anne, even sent a card to her sponsored Guardian, which he was thrilled to receive (right), and she also kindly donated a new laptop to the project. Through the blog we have also received donations of digital cameras, mobile phones, and camera traps, which have given us some great photos, even of an attack on a camera trap by our collared male lion Kasayio!



Photo by: A. Howard

This year we have also had Christmas cards printed, which we sold on the blog and raised \$638. The blog also raised the \$1000 needed to hold the Lion Guardian Games and our Facebook cause has tapped into a new online community, amplifying publicity of the project.

We would like to send our thanks to WildlifeDirect, and everyone who is part of our online community and has donated to us. Your support helps makes this project possible.

11. Media

This year, we were honored to join the front of the campaign against the American-manufactured insecticide Furadan, which has been widely used in rural Kenya to eliminate lions, hyenas and other carnivores. In November 2008, CBS 60 Minutes came to Kenya to document the use of Furadan and the work of Living with Lions, the Lion Guardians and the Maasailand Preservation Trust. This program aired in the US on March 29th, and received a huge response. Immediately following the broadcast, the manufacturer of Furadan withdrew it from the Kenya market, though carbofuran, the generic version of Furadan, is made by other companies and can still be imported under different trade names. We have also found Furadan still on sale in a number of shops in southern Kenya, so the problem of wildlife poisoning is sadly yet to be solved.

The Lion Guardians have featured in a number of articles this year; American magazine Marie Claire featured a story about Leela and the Lion Guardians in its September issue and American Vogue visited Eselenkei and interviewed Leela and the team for an article which appears in the November issue. Ecoworldly.com published an article about the project in October. This December, National Geographic Magazine is due to feature a one page piece on the demise of lions, which highlights the Lion Guardians.

We have also been visited by a Swiss film crew, who spent a month with Living with Lions and the Lion Guardians for a documentary “*The twilight of the lions*” which aired on Swiss TV in November and on ARTE in France and Germany in December. World news agency Reuters also visited the Mbirikani Lion Guardians in



September. They filmed a piece on the project and the lion conservation work on Mbirikani, which has been aired by broadcasters worldwide. The BBC TV series *Explore* filmed a piece on the project at the end of last year, which aired on BBC2 in the UK on 1st February, and we were also visited last year by Alex Chadwick of National Public Radio. His two-part Day to Day series on Living with Lions and Lion Guardians aired on 11th and 12th March.

In April, Leela was honored by Wings WorldQuest (www.wingsworldquest.org), an organization which promotes women explorers. This opportunity opened many doors for the project including attracting the interest of Vogue, live NPR and National Geographic radio interviews, and a speech at the Museum of Natural History in New York City.



Photo by: A. Howard

Kasanga, Olubi, and Kapande from Mbirikani filming



12. Looking Ahead...

In the upcoming year, we will focus our work on the following:

- Our hope is that by July we can expand the Lion Guardians project to the southern regions of Olgulului (south of Amboseli National Park), as both the community and leadership has requested our help in this region. We have also been asked by other NGOs and organizations to help initiate or train local scouts in various areas in East Africa where there are intense human-carnivore interactions.
- We are working toward creating interactive devices that can ensure accurate data collection, while also being simple enough for any Lion Guardians to use. For example, this device will use a touch-screen and audio reminders (in the Maasai language) so when a lion is found it is simple for them to document it by following the interactive and intuitive design of the software (using cybertracker as a foundation with a few adapted tweaks). Additionally, the devices will be made durable enough to withstand the harsh conditions of the African bush (waterproof, droppable).
- The Lion Guardian team is working on a "*Lion Guardian Handbook*" which will include relevant information and materials important for a practitioner/conservationist working with local communities on monitoring carnivores and mitigating conflict. We hope this is something that can be used widely, where pastoralists and carnivores overlap.
- We are currently working on a publication that uses Lion Guardians as a case study to illustrate a technique of working with local people to monitor carnivores using non-invasive data collection methods.
- This upcoming year, Stephanie Dolrenry will continue to implement and test various non-invasive survey and monitoring techniques, including working with the Lion Guardians to collect hair and fecal samples, as well as continuing to adapt the current Lion Guardian spoor count methods to changes within the ecosystem. Also, we will be testing the accuracy between traditional vs. western based techniques (e.g. telemetry, GPS) in monitoring carnivores.
- Lastly, we would like to welcome Elizabeth Carabine to the Lion Guardians project. She will be helping with the overall running and management of the project.



13. Acknowledgements

We would like to thank all our donors and funders who have supported the project throughout the year. First and foremost, we want to thank Panthera for the endless support and encouragement. The expansion could not have been possible without their help. Also, we would like to thank the Rufford Small Grants for supporting the expansion, and a collaborative grant between WWF-Netherlands and Leiden University has helped hire three Lion Guardians on Olgulului.

Many thanks to the Maasailand Preservation Trust and Porini Ecotourism for their collaboration and support, as well as Ol Donyo Wuas Lodge and Porini Amboseli Camp for their logistical assistance. We would also like to thank WildlifeDirect and all our blog readers who have donated online. Lastly, this project would not be possible without our umbrella organization, Living with Lions and our great fearless leader, Dr. Laurence Frank.

Ashe Oleng Pookin and Happy Holidays!

The Lion Guardians Team

