

Lions, livestock and spears

Text by Seamus MacLennan

Ranging far beyond the borders of formal protected areas, the lions of Masailand in southern Kenya eke out a precarious existence. Tempted by the easy pickings of Maasai livestock, they are vulnerable to retribution and are being killed at an unsustainable rate. In March 2004, wildlife biologists **Seamus MacLennan** and Laurence Frank created the Kilimanjaro Lion Conservation Project, an initiative that is finding ways to broker a peace between Africa's largest free-ranging lion population – and the Maasai who regard it as an expensive nuisance. ▶



SIMON MACLENNAN

ABOVE Two lionesses make their way across the plains of the Mbirikani Group Ranch. Lions here are rarely seen during the day and avoid contact with humans wherever possible.

PREVIOUS SPREAD Although Masailand encompasses protected areas such as the Masai Mara National Reserve (pictured here), only a small portion is formally gazetted and most of the lions survive in the communally owned Maasai areas.

One morning in early 2005, as the sun was rising over southern Kenya, Richard Bonham, owner of Ol Donyo Wuas Lodge, and I set off in his Cessna to locate several radio-collared lions. After about half an hour of banking and circling over the rugged, thickly vegetated lavas of the Chyulu Hills, we set course for Looisoitor, a flat-topped hill surrounded by small-scale farmers and scrubby, arid bush. It was also home to lion 'F', affectionately known as Felicity, one of the animals being monitored by the Kilimanjaro Lion Conservation Project (KLCP). With our nose pointed towards the snows of Kilimanjaro, at about 2 000 feet above ground, our receiver had no difficulty in picking up the faint pulses of Felicity's radio collar. After a series of passes and changes in direction, we flew over the area from which the signal seemed to be coming. It appeared that Felicity had moved south of her usual spot to an area of scattered human settlements called Olorika. I marked the position on a handheld GPS and Richard turned the Cessna towards home.

Later that day, my assistant and I packed up the radio-telemetry equipment and followed the dusty, indistinct track

south to Olorika. I had retrieved the GPS from the plane and was following its infallible black 'go to' arrow that would lead me to the area where Felicity had apparently taken up residence. We wanted to establish whether she still had her cubs and to try to understand why she had moved to the new area.

The last kilometre couldn't be traversed by vehicle, so we set off on foot. Rocky outcrops and thick vegetation made the radio-tracking difficult and at one point I lost contact altogether. After some cautious circling, we established that the signal was coming from a deeply eroded gully, the same location as a pungent odour of rotting meat. We had found lion 'F', or at least, most of her. Someone had severed the limbs from the torso and thrown the various body parts into the gully. They had also buried the collar under half a metre of red earth, obviously trying to hide the butchery.

While we were clambering around the gully, manhandling the lion's remains, a few women carrying water containers back to their homes stopped nearby.

'Ah, yes. It came into the boma and took one of the goats. It was speared by the men from my family,' said one, in response to our questions. After assurances that, although my vehicle was

green, I had nothing to do with the Kenya Wildlife Service (KWS), we were allowed to visit the boma where Felicity had pounced on her last goat. While the women of the family recounted the story in loud, angry Maa, the men watched stoically as I investigated the walls of the boma. I pointed out the large and rather obvious design flaws that if fixed might have prevented the incident. They shrugged and replied that if any more lions came around they would kill them too.

My interest in annoying carnivores aside, we were cordially received. In fact the grandmother of the home even gave back the bolts and small brass plates that had been used to hold the collar around the lion's neck. We returned to camp with one used radio collar, heavy hearts and food for thought. This was the first collared lion of the study to die at the hands of people.

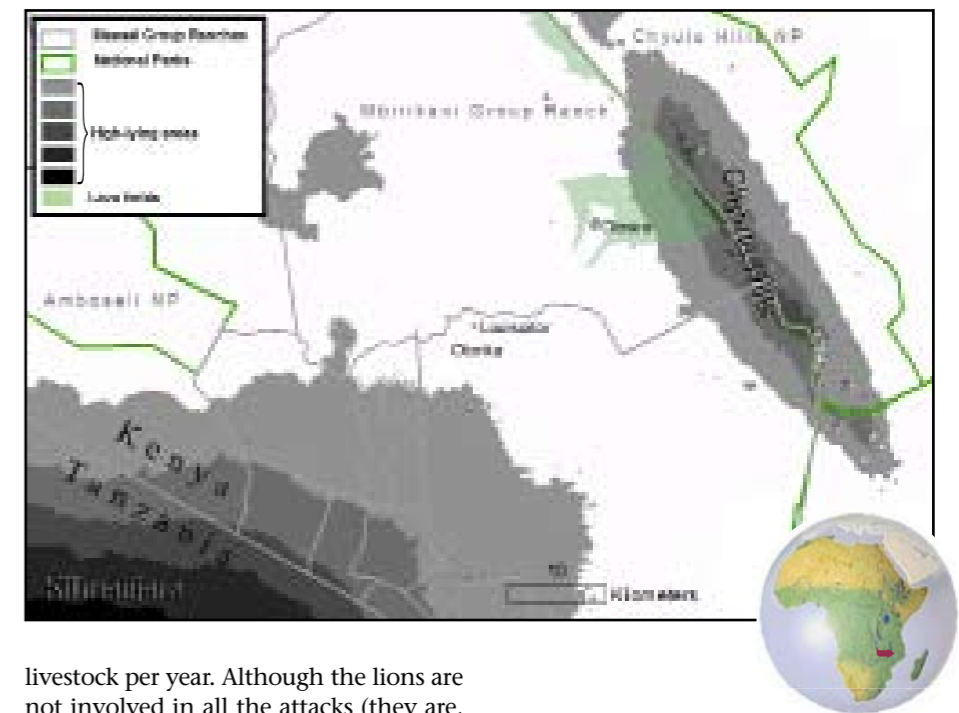
Masailand is a predominantly communally owned area in southern Kenya and north-eastern Tanzania on which the Maasai live. At about 93 000 square kilometres, it encompasses Amboseli National Park and the Serengeti-Mara ecosystem, home to the largest mammal migration in the world. The size of the Serengeti National Park notwithstanding, not much of this land has been formally protected, something that had few adverse consequences in the past because of the relatively easy co-existence of the pastoralist Maasai and wildlife.

Experts estimate that Tanzania has over half of the world's 25 000 to 30 000 lions, with a large proportion in Masailand (lions are extremely difficult to count, hence the uncertainty about exact numbers). Over the past few years, however, local conservationists have observed a radical decline in lion numbers, as pastoralists retaliate against the depredation of their livestock.

To investigate the situation, Laurence Frank and I established the KLCP on the communally owned 1 200-square-kilometre Mbirikani Group Ranch in March 2004. The ranch is typical of Masailand. It is semi-arid and inhabited by 10 000 traditional Maasai pastoralists, who own approximately 80 000 head of livestock. The ranch also supports a healthy population of migratory herbivores.

About 15 lions together with other large carnivores have been implicated in the 500 or so reported attacks on

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livestock per year. Although the lions are not involved in all the attacks (they are, in fact, only responsible for 15 per cent of livestock losses), there was a sense that baseline information on these carnivores should be gathered as quickly as possible: the game-scout network in the area had already recorded 22 lions killed on the ranch, all speared or poisoned by the Maasai.

Three facts became obvious when we started collaring animals and investigating livestock depredation on Mbirikani. Taking into account available habitat and prey, the area has far fewer lions than would be expected; they are being killed at a completely unsustainable rate; and people seem far less tolerant of lions than they once were.

Our observations of the lions themselves show that this population is under extreme pressure. The big cats are rarely seen during the day. There are no adults over the age of six years and they are very secretive and wary of humans, hiding in the ranch's thickest, most inaccessible habitat.

The situation is a product of the socio-cultural context of the area. Much of Kenya's remaining wildlife lives outside the borders of parks and reserves, among its burgeoning human population. In the past there wasn't too much competition for land, but since 1960, the ►



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country's population has grown from eight to 33 million, and the semi-arid ecosystem of Masailand has started to deteriorate under the competing demands of wildlife, people and livestock. As a result, the Maasai have lost their tolerance for livestock casualties incurred by carnivores.

Ernest Hemingway spent many months in southern Masailand in the 1930s, hunting, drinking and writing. 'The lion,' he declared, 'is a fine animal. He is not afraid or stupid. He does not want to fight, but sometimes man makes him, and then it is up to the man to shoot his way out of what he has got himself into.'

These words represent the view of many Mbirikani Maasai today. Most people here seem to have an inherent appreciation of the aesthetic and cultural importance of lions. They agree with Hemingway that conflict with lions is caused by people and their livestock, but that even so, it can – and should – be solved through the barrel of a rifle (or in this case, at the point of a spear).

Unlike many traditional studies, which focus exclusively on lion biology, the KLCP targets the human aspect of the livestock depredation equation, where the most effective conservation intervention can be made. Leela Hazzah has spent months living with the community and participating in everyday life, examining people's attitudes and coping strategies in an effort to understand the context of their conflict with large carnivores. Traditionally, the predominant activity on the ranch has been semi-nomadic, subsistence pastoralism. However, this is changing quickly as the Maasai settle down, convert to Christianity and start participating in Kenya's cash economy. At this early stage in the research, it seems that the transition from an ancient pastoral way of life to modern-day mores plays a role in people's recent loss of patience with large carnivores.

By comparison, the questions that we are trying to answer about the lions are relatively simple. What makes a 'well-behaved' lion stay away from livestock? In terms of habitat and lack of interference from humans, what are this lion population's minimum conservation



ARIADNE VAN ZANDBERGEN

requirements? What is the relationship between this population and those in the nearby Chyulu, Tsavo West, Kilimanjaro and Amboseli national parks?

Wildlife conservation – like cattle-keeping – is difficult. Plans have to be carried out on a large scale to accommodate animals that range far beyond the borders of national parks. Few of East Africa's protected areas are large enough to support viable populations of wildlife and the animals rely heavily on the goodwill (or at least tolerance) of the surrounding landowners. To maintain the Masailand lion population, we need to figure out how to keep lions alive outside national parks and reserves.

KLCP is not alone in recognising this fact. Conservationists are scrambling to implement strategies that can conserve aspects of the Masailand ecosystem. Run by Richard Bonham and Tom Hill, the Mbirikani Predator Compensation Fund is an experimental programme that reimburses individuals for livestock that is killed by wild carnivores. The programme appears to be effective, as fewer lions were killed on this ranch in 2006 compared with previous years, when there was no compensation. ▶

ABOVE As Kenya's human population has grown and competition for land and resources has become more intense, the Maasai, once fairly accepting of predation on their livestock, have become increasingly intolerant of losses incurred due to wild animals.

OPPOSITE Old males, such as this magnificent animal in the Masai Mara, no longer occur in the Kilimanjaro Lion Conservation Project study area. They have all been killed by Maasai seeking revenge for attacks on livestock.



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SIMON MACLENNAN

Although KLCP's study area supports sizeable populations of traditional lion prey species, there are far fewer lions than researchers would expect.



The Kilimanjaro Lion Conservation Project, part of the Living with Lions (LWL) initiative, is working to restore, conserve and manage viable populations of

large carnivores by developing management techniques that foster the coexistence of people, livestock and predators in areas bordering parks and other regions without formal protection. LWL's work is a unique blend of hard science and community-based conservation. This is exemplified by the Lion Guardians, warriors who have converted from killing lions to protecting them, and who assist their communities in preventing livestock depredation.

Laurence Frank (University of California), Leela Hazzah (University of Wisconsin) and Seamus MacleNNan (Oxford University) are the principal investigators and collectively have over 35 years' experience working with large carnivores and communities in Africa. For more information, e-mail seamus@lion-research.org or visit www.lionconservation.org

(Of course, there are also far fewer lions left to kill.) The fund is privately financed and provides an innovative approach to partnerships between pastoralists and conservationists. KLCP also works closely with KWS to try to put together conservation strategies for Masailand as a whole.

The lions of Kenyan Masailand will be gone in a few years, unless urgent action is taken. We need new mechanisms that will emphasise the value of wildlife to people, which in turn would increase their tolerance of wild carnivores. In neighbouring Tanzania, significant revenues are earned from hunting. This vastly increases people's receptivity towards conservation, and the 250 000 square kilometres designated for hunting concessions host impressive populations of wildlife. Kenya banned trophy hunting in 1977, which many analysts argue has rendered all wildlife a cost rather than a benefit to communities, and has resulted in a 70 per cent decline in the country's animal numbers.

I often think back to the lions I have come to know. In December 2005, after months of rumours and misleading, out-of-date reports, we located an elusive uncollared adult female, the mother of two young cubs. Although she had clearly been in the study area for some time, we hadn't been able to pinpoint her location because she had remained well hidden in impenetrable lava fields

near Olosira Mountain. After deploying a wildebeest carcass and playing some enticing sounds of a dying buffalo calf, we managed to get close enough to immobilise her and fit a GPS collar. This collar could track her position each hour for the rest of her life, providing us with detailed information that would help us to analyse her role in lion stock-raids on the ranch. She became lion 'H', the first female in the study to wear a GPS collar.

Data from the collar showed that, for the most part, she avoided heavy concentrations of livestock and people. Her cubs, a male and a female, grew older and the family became more approachable. In May 2006, teenagers from a community on the ranch hunted her down and speared her. There was no dead livestock involved, nor any threat to people (actual or perceived).

It was a huge disappointment, but at the same time there is cause for hope. Unprovoked attacks on lions are becoming less frequent through the efforts of conservationists. KWS is beginning to acknowledge that there is a problem and is showing an interest in the outcome of our research. Lion 'H's cubs are still alive and apparently old enough to hunt for themselves. (Sadly, her mate Eddie has since died in a poacher's snare.) This is a decisive time in Masailand – if these cubs are allowed to survive and prosper, we may be able to reverse the slaughter of the past few years. ■