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The Cape Leopard Trust Annual Report 2011



1. Introduction

The Cape Leopard Trust (www.capeleopard.org.za) was launched in 2004 as an active predator conservation working group in the Cape. It uses research as a tool for conservation, finding solutions to human-wildlife conflict and inspiring interest in the environment through an interactive and dynamic environmental education programme. Since its inception, it has become an authority on predator conservation in the Cape, and one of the leading authorities in SA. The project was initiated in the Cederberg studying the ecology of the Cape mountain leopard, a highly elusive predator differing in many respects to its northern counterparts. The project has grown quickly to include broader conservation initiatives in the Boland mountains, Namaqualand and Gamkaberg/Swartberg region as well as launching the Cape Leopard Trust Environmental Education Programme.

2. Research

The Cape Leopard Trust (CLT) has conducted research in four key areas in the Western and Northern Cape, namely; The Greater Cederberg Biodiversity Corridor; The Swartberg - Gamkaberg areas of the Gouritz Corridor; the Boland mountain chain and the mountainous region of Namaqualand (Fig. 2.1). Here we present feedback on the various projects:

2.1. Cederberg

Researching the ecology of leopards in the Cederberg has been ongoing since 2003. Quinton Martins has formalised his study on “The ecology of the leopard *Panthera pardus* in the Cederberg Mountains” by obtaining his PhD through the University of Bristol, U.K. He has published three scientific papers in international peer reviewed scientific journals. Two more papers are in review, and two more in preparation. Results of his work are also in the process of being documented in a popular form and made accessible to the public.



Figure 2.1: Cape Leopard Trust study areas

2.1.1. Cederberg Leopard Research - The Way Forward

Predators are now recognised as being an integral facet of any functioning ecosystem. Research undertaken by the Cape Leopard Trust has aimed at contributing to understanding this role. Using modern research techniques, such as GPS radio tracking, key spatial and behavioural data contribute to understanding the conservation needs of leopards in the Cederberg Mountains and other mountain regions. Furthermore, the influence of the CLT and a long-term study in the area has also resulted in ZERO leopards killed or removed in its study area for almost 5 years (since March 2007). Prior to the establishment of the project, an average of 8 leopards were killed a year here. Having addressed the most pressing conservation issues for this predator and having established a more stable leopard population in the Cederberg, we are now poised to address more fundamental ecological questions. These include whether shifts in home range sizes of leopards derived in the 1980's to today (50 to 350km² in the Fynbos) are a consequence of factors such as unnatural disruptions through persecution or changes in prey base, or changes in the technology used to determine leopard range use (i.e. from VHF to GPS tracking methods). This will lead to a better understanding of the needs and future conservation of this enigmatic and flagship species.

In May 2011, we began the first phase of the post-PhD research. We employed the services of one of the world's leading experts in large carnivore capture to assist us in capturing leopards using foot-loop traps, and had a film crew document the progress of the project for the entire month. The foot-loop traps are globally recognised as the safest technique to capture large cats. Having used cages for our captures prior to this, and knowing the inherent risks involved in this method, we were obliged to test this method. We were based at Driehoek (Fig. 2.2), a stunning tourism destination in the heart of the Cederberg, and centrally situated for our target animals, namely F10 ("Spot") and M6 ("Max").



Figure 2.2: Driehoek valley below with Sneeuberg in the distance.



Figure 2.3: Max with killing tools in perfect condition using a foot-loop trap.

The month ended successfully with the capture of Max (Fig. 2.3). He is the first adult leopard we have a very accurate age for (7 ½ years at the time), as he was captured as a juvenile in the 22nd August 2005 after killing a lamb on a farm. He was released on site and remained in the area for a couple of years before being pushed out by another male, M13. Six years after first “meeting” Max, he established his territory in a prime area including Sneeuberg and Driehoek. We know of at least 2 females in his area, one of whom is F10 – “Spot”, who has been monitored by GPS radio-tracking since June 2008.

Safe animal capture requires intensive monitoring of traps and our team literally worked 24/7 monitoring traps for the whole 4 weeks. Each trap had a fail-safe transmitter on it allowing us to monitor the trap remotely. Traps were monitored every 2 hours day and night. When we finally caught Max, it was just after midnight when we got the trap signal. A Veterinarian had assisted us immobilize and collar him – all by 4am. Being a typical Fynbos Cape mountain leopard, he weighed a mere 28kg, despite being in very good condition. Interestingly, Karoo leopards in the Cape tend to be on the heavier side, reaching up to 50kg, but all are significantly smaller than their northern counterparts (Martins, 2010).

Our research has shown that one needs no more than 3 months’ GPS radio collar data in order to obtain a good indication of home range size of a territorial leopard in the Cederberg. All of this fascinating information is leading to a greater understanding of predator ecology that can ultimately be used to benefit humans, as in the improvement of livestock management techniques. Also, we are learning more about the role of predators in our environment and the effect of the presence (or absence) of key mammals in our ecosystem. However, despite these benefits, as a researcher, one must always weigh up the costs/benefits of intrusive research

techniques. Collaring of animals requires capturing and handling of animals under difficult and uncertain conditions. Despite our efforts to ensure safe trapping, there remains the element of risk. This is compounded by animals having to wear these tracking devices. Thus, if planning to collar animals, there must be good reason to do so, and most certainly a plan to remove collars again once the data has been collected.

2.1.2 Black Eagle Project

The Black Eagle Project was initiated in 2011 under the auspices of the Cape Leopard Trust and the Animal Demography Unit, Department of Zoology, University of Cape Town. The project is being undertaken by Megan Murgatroyd, a postgraduate student registered at the University of Cape Town. The old name for the Verreaux's eagle, Black eagle, is used to name the project because this is the name by which the species is universally known by the Cederberg and Sandveld farming communities where the research is focused.

The iconic flight of the Verreaux's eagle *Aquila verreauxii* (Fig. 2.4) is a breathtaking phenomenon. In the Cederberg Mountains it is still common to see a pair flying in their unique pendulum formation over the cliffs and territory which they inhabit. However, in other parts of the country their long-term survival might be threatened by radical change in land-use. For example, although these eagles remain prevalent and breeding in the Western Cape's Sandveld, this area is now classed as the second most highly threatened ecosystem in South Africa and at least 50% of the land has been converted for agriculture (C.A.P.E. 2008; Low 2004). The main focus



Figure 2.4: Verreaux's Eagle in full flight.

of the project is the Verreaux's eagle and its main prey, the rock hyrax *Procavia capensis*. In particular, the project aims to measure the impacts of land-use on the diet and hunting behaviour of these eagles by researching and comparing those breeding in the Cederberg Mountains and those in the threatened Sandveld.

We are taking an ecosystem approach. As a top predator this eagle, as with leopards in the Cape mountains, is vulnerable to perturbations to the environment at any lower trophic level. As an umbrella species, successful conservation of the Verreaux's eagle is dependent on the entire ecosystem remaining healthy. At the same time, the conservation of this top predator helps enable the ecosystem to remain healthy by preventing trophic cascades or downgrading, the process whereby the loss of a predator enables a prey species to increase in abundance in such a way that the stability of the ecosystem is disturbed.

The distribution of this eagle coincides closely with that of their staple food, the rock hyrax. Habitat change appears to be a cause of declining prey availability for the Verreaux's eagle. Declines in the rock hyrax are thought to be the major driver behind losses of the Verreaux's eagle from former breeding grounds. For example on the Cape Peninsula the number of breeding pairs has gone from at least five to just one in the last 20 years (Jenkins & van Zyl 2009; Rodrigues). Research work initiated on rock hyraxes by the Cape Leopard Trust has provided further insight into the possible factors related to these declines (Parsons *et al.*, 2008)

2011 was a year of intensive fieldwork to launch the project. The primary task was to establish a study area and find every Verreaux's Eagle nest within it. This was carried out with the help of Lucia Rodrigues who has been monitoring the breeding eagles since 2004. In the Cederberg twenty-four nest structures were located. However, some of them may be very old structures. As some of these proved to be



Figure 2.5: (i) Verreaux's Eagle on nest; (ii) Megan setting up GPS downloading station.

inactive this season, monitoring was concentrated on eight active nests and four others found late in the season. Incubation started as early as May and from these up to seven chicks fledged. One nest was unsuccessful at incubation stage. In the Sandveld up to eight chicks fledged from fourteen nests monitored. Three pairs failed, two nests had pairs present throughout the season but the breeding attempt was unknown and one nest was inactive.

Monitoring will continue in 2012, combined with exciting advances in the project. Since visiting a similar study of the Bonelli's Eagle *Aquila fasciata* in France, the Black Eagle Project will now be embarking on a GPS tracking study. We will be using a novel device that capable of providing unique insight into the behaviour of this species. The study will clarify the significance of changing land use for the Verreaux's Eagle. Additionally, the installation of remote nest cameras will help us understand the diet and any important differences between the prey-base available in the Cederberg and the Sandveld. These data will also contribute to the CLT leopard research in the area, as rock hyraxes, together with klipspringers *Oreotragus oreotragus*, constitute 78% of leopard diet in the area. The cameras will also give us valuable information on the timing of breeding events in each area.

The outcomes of this project will indicate the habitat or areas which are most valuable for conservation and will contribute to directing conservation efforts. Evidence that this species is of conservation concern has been provided by the Southern African Bird Atlas Projects. It is of concern that in most areas of the Western Cape, the reporting rates of the Verreaux's Eagle have decreased since the first atlas project, making this project all the more important.

A live feed camera was tested at a nest in the Cederberg. In 2012 we hope to have it permanently at a nest and streamed online. This will be important to contribute to data on the diet of the Verreaux's Eagle and the fate of its breeding attempts.

2.2 Boland Project

The CLT Boland Project is approaching the end of its second year continually growing from strength to strength. Data from this large-scale remote sensing camera trap study on the leopard and mammal populations in the Boland mountains remains captivating and inspiring to the CLT team and public.

Aiming to establish the first rigorous population estimates for leopards in the Boland region, the ultimate objectives are to (i) generate significant public awareness surrounding leopards and mammal conservation; (ii) obtain baseline data necessary for ensuring the survival of leopards in the Cape mountains; (iii) establish presence/absence/relative abundance of resident mammal populations; and (iv) identify areas of leopard-farmer conflict while finding ways of mitigation.

The CLT Boland Project study area covers over 3,000 km² (see Fig. 2.1). It was subdivided into three survey areas – northern, central and southern – which are being surveyed separately (Fig. 2.6). To date, two of the three subsections have been surveyed, covering the area between Bain's Kloof in the north to the Kogelberg in the south. Fifty-two adult and sub-adult leopards, 10 cubs and 25 different mammal species were identified between March 2010 and November 2011.



Figure 2.6: The CLT Boland Project study area and its three sub-sections.

Almost completely surrounded by human development, the Boland mountains are on the doorstep of millions of people. This has allowed us to generate considerable environmental awareness using results from our research. Camera trap photographs can be utilized effectively to attract and inspire an interest in biodiversity.

2.2.1 Camera Trapping Surveys in 2011

The southern survey (December 2010 - April 2011) extended from Jonkershoek Nature Reserve near Stellenbosch southward through the Hottentots-Holland Nature Reserve to the Kogelberg Nature Reserve on the coast. This area is more fragmented due to towns and agricultural development than Limietberg NR. Results from the 82 cameras at 50 locations revealed the same species assemblage as for the 2010 Limietberg survey, whereas 18 adult leopards and 2 cubs were identified in the southern study area (see Fig. 2.7)

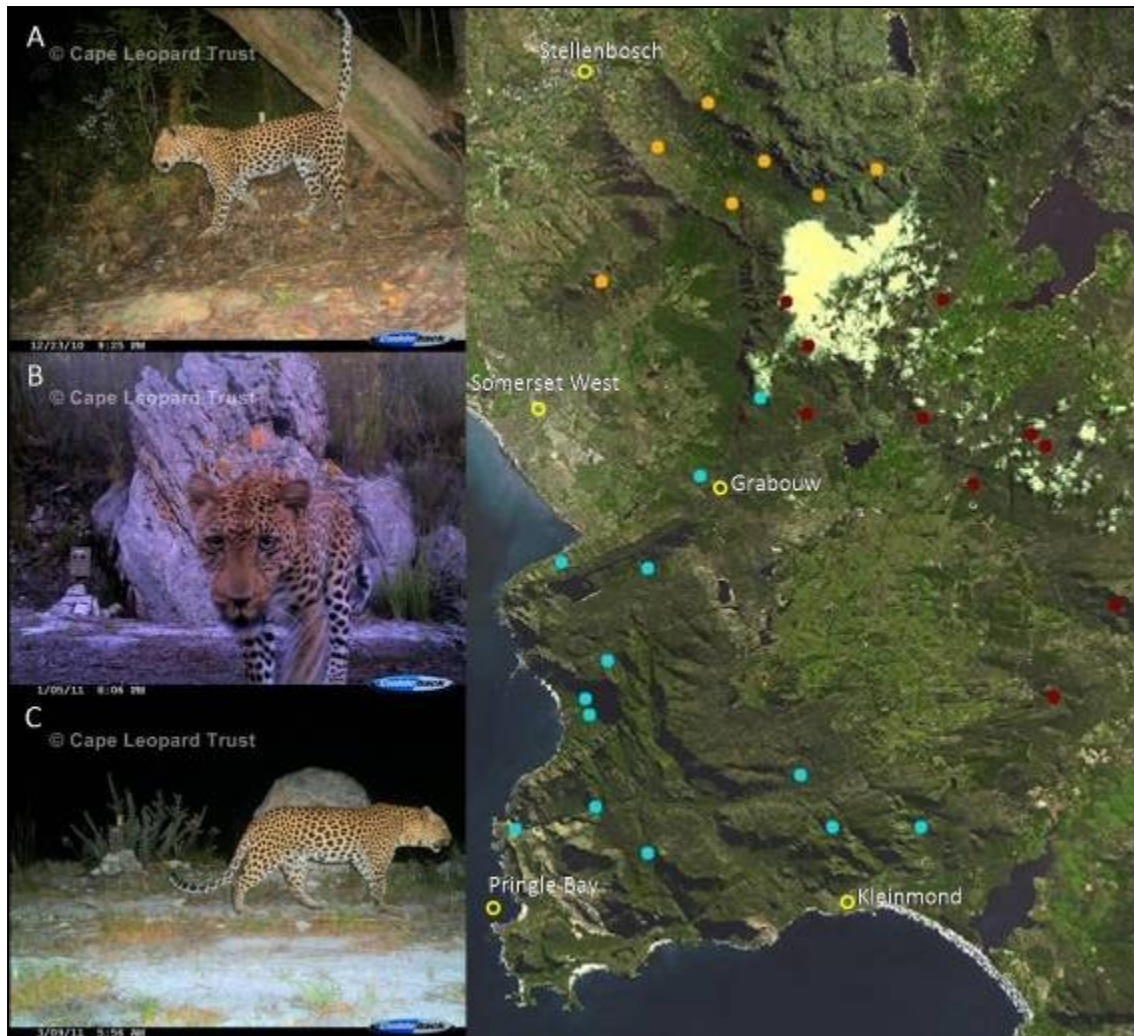


Figure 2.7: Three adult male leopards in the Boland Project southern survey area. A) Jack (BM14) scent-marking a tree in the Jonkershoek NR. Orange dots indicate camera locations where this individual was photographed. B) Scott (BM12) roams the Kogelberg Biosphere Reserve – light blue dots. C) Popeye (BM17) has been recorded in the Hottentots-Holland and Groenlandberg NRs – red dots,

Extensive veld fires swept through the Limietberg Nature Reserve, the core area of the central survey, during March 2011. A massive area was severely burnt, and almost 50% of the 2010 survey's camera locations ended up in newly burnt areas (Fig. 2.8) – this presented us with a unique opportunity to investigate the fire's impact on the movements of leopards and their prey. After deliberation with CapeNature and other scientists, we decided to postpone the northern survey (Beaverlac and Groot Winterhoek Reserve) to late 2012 and to re-survey the central survey area during the same period in consecutive years – resulting in a before and after fire survey. This allowed us to investigate the effect of Fynbos fires on the large-scale movement patterns of leopards, as well as other mammals.

All preliminary data on leopard numbers and ranges, as well as the mammal distribution data recorded by our camera traps, have been submitted to the CapeNature State of Biodiversity (SoB) database contributing significantly to this database and providing new locality records for several species.



Figure 2.8: Extensive veld fires during March 2011 destroyed nearly 400 km² of vegetation in the Limietberg Nature Reserve (central study area). The blue shaded area indicates the extent of the fires; red dots show the location of camera trap stations; yellow line shows the border of the Limietberg NR

2.2.2. Virtual Museum for Mammals

The much awaited launch of VIMMA (Virtual Museum for Mammals) took place during the Winter Digital Biodiversity Week organised by the University of Cape Town's (UCT) Animal Demography Unit (ADU) during July 2011. VIMMA is a website where members of the public can act as citizen scientists by submitting their mammal photographs (with accurate geographical locations) to this centralised database. From these data, up-to-date distribution maps are created for each species. These maps are available online and as more data are added by the public and researchers (such as the CLT), species distribution maps can be updated and made more accurate. To date, the CLT has contributed 3312 mammal distribution records to the VIMMA database, submitted by the coordinators of the Boland Project. We are systematically logging all data from all CLT project areas for VIMMA. VIMMA entries now represent over 122 mammal species ranging from bats to cheetah (Fig. 2.9).

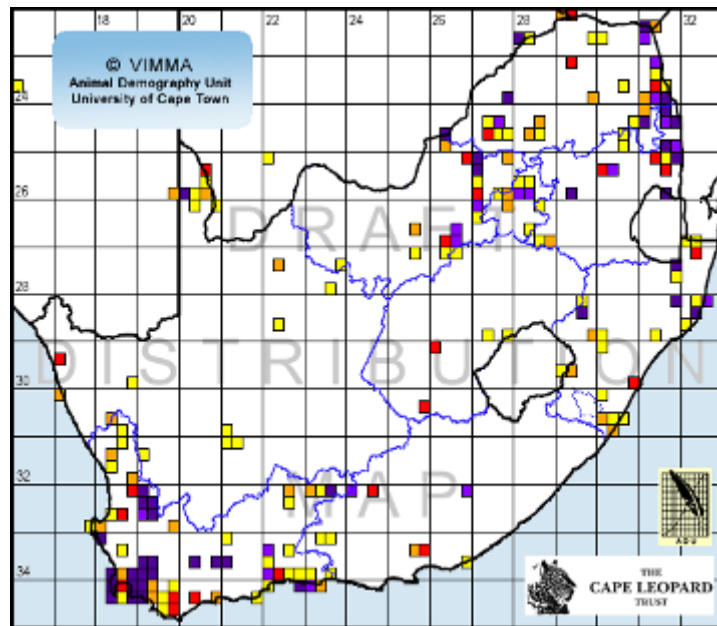


Figure 2.9: VIMMA draft distribution map depicting species richness counts for quarter degree squares. (yellow = 1; orange = 2; red = 3; light purple = 4 – 5; dark purple = 6 – 27). Image available online at: <http://vmus.adu.org.za>

2.2.3. Public awareness

One of the very rewarding aspects of the Boland Project coordinators' responsibilities is to give presentations on the CLT's work to the general public and schools. In this way the public are not only made aware of the plight of the leopard, but also to the mammal diversity in the mountains and the related conservation issues. A large proportion of the audience, especially children, are often unaware of/familiar with the plethora of animals that naturally occur in the Western Cape. During 2011 the Boland project coordinators presented to over 2700 people in 27 interactive talks. The project was featured in 17 published newspaper articles, magazines, and newsletters, and in articles on more than 15 different websites and had exposure as several festivals and workshops.

2011 has been a successful and busy year for the CLT Boland Project, and we are looking forward with excitement to 2012!



2.3 Gouritz Project

2011 has been another exciting year for the Cape Leopard Trust's Gouritz project. Once again, we have been able to expand and develop the project to further enhance its conservation value and to ensure a lasting contribution to the preservation of the incredible biodiversity of the Gouritz region.

The single biggest research activity of the year has been the initiation of the first ever systematic camera trap survey in this area (Fig. 2.10). While camera trapping has been an important activity in the Gouritz area since the project started in 2007, we have been severely restricted by the number of cameras available. While it has been possible to use cameras to determine the presence of leopards and other animals in various areas, we have never been able to work out the population size and density in this area; data which are critical for the future monitoring of this population.

Fortunately we have been able to remedy the situation this year, thanks largely to a generous grant from the WWF's Green Trust, as well as support from UCT, which increased the number of cameras available to the project from 11 to 70. We were thus able to start a broad-scale survey of an area of approximately 3 000 km², extending from the Swartberg Mountains in the north to close to the Langeberg and Outeniqua Mountains in the south, and including the entire Rooiberg and Gamkaberg Mountains.

This survey is important for a number of reasons. It will provide the first ever estimate of the size and density of the leopard population in the Little Karoo. Not only is this information intrinsically useful, but it will also establish a baseline against which we can monitor the leopard population in future. Repeating the survey will allow us to track any changes to the leopard population, and can provide a basis for future management actions.



Figure 2.10: English volunteers James Mainwaring and Huw Vaughan-Jackson hard at work mounting camera traps onto their stands. The stands help to hold the camera steady and reduce baboon interference with the camera traps.



Figure 2.11: African striped weasels were one of the species that we recorded for the first time in 2011. Others included African clawless otters, as well as introduced animals such as nyala.

We will also gather significant data on the presence and distribution of other mammals in the area (Fig. 2.11). Again useful, as this information's greatest value probably lies in the ability to track changes in these distributions in future. For example, the introduction of various extra-limital species, such as impala and nyala into the area could pose a severe threat to the unique floral biodiversity of the Little Karoo. Camera traps will allow us to monitor the distribution of these potentially damaging species and identify instances when they have escaped from the fenced game farms to which they are currently restricted.

We also decided to extend the survey into low-lying areas in which leopards are unlikely to be found. The purpose of this was two-fold; firstly to check that our assumption about leopards being largely restricted to mountainous areas was correct, and secondly to see whether there were substantial differences between the species found in the mountains and the low-lying areas.

The survey started in March 2011 and is expected to be completed around the middle of 2012. To date, pairs of cameras have been set up at 86 sites, many of which are on private land. One of the beneficial side-effects of the camera trap survey has been that it has brought us into contact with many different landowners. Private landowners have generally been very happy to have their properties used for the survey; this has the added benefit of showing off the camera traps and providing landowners with a demonstration of what they can expect should they purchase cameras of their own!

We have also started doing formal interviews with landowners to gather data on conflict with wildlife in the area. While complaints of damage caused by leopards

remain relatively infrequent in the Gouritz area, other species such as baboons, black-backed jackal, caracal and porcupines are often viewed as having a major impact on local farming activities. This conflict has the potential to have a serious impact on leopards, particularly if farmers resort to using indiscriminate traps to capture other predators such as caracal.

While a certain level of wildlife conflict is inevitable, we believe that some of the management actions used by farmers are at best ineffective and at worst actually exacerbate the problem. We hope to gather data on the various techniques used by farmers to manage and reduce conflict with wildlife, and to use this information to identify effective, locally-relevant management techniques that can be broadly disseminated and used amongst the local farming community. Gathering data from the farmers themselves is an important first step in this process.

Leopard trapping activities have also continued this year, although these were largely fruitless with leopards opting to pass the cages by! In June we captured GM10, 'Frikkie', a young male, but decided not to collar him as he was still quite young and likely to grow substantially in the next year or two (Fig 2.12). However, we were able to collect valuable DNA and hair samples from Frikkie, as well as recording his measurements, etc.



Figure 2.12: Gareth with GM10, 'Frikkie', a young male who was released without being collared

Of our collared leopards, GM1, 'Oom Pep', has continued to amaze. He has regularly preyed upon baboons, on one occasion killing two baboons in a single hunt (Fig. 2.13). The fact that one of these baboons was an adult male, equipped with ferocious canines, makes this feat all the more impressive!



Figure 2.13: Dangerous catch? The skull of a male baboon which fell victim to GM1, 'Oom Pep'

The year ahead will offer fresh challenges. Chief amongst these will be recapturing and removing collars from our collared leopards. While we will certainly miss knowing what these magnificent cats are getting up to, it will be great to know that they are once again free of any human influence. Retrieving the collar will also provide us with far more detailed data on the leopard's movement and activity patterns. 2012 should also see the conclusion of the camera trap survey, after which we will finally have some basis for answering questions on how many leopards there are in the mountains of the Little Karoo.

2.4 Namaqualand

A study conducted by the CLT in Namaqualand (2008/2009) provided the first scientific evidence of resident leopards in this region since 1922 (Shortridge, 1934). More importantly, it was discovered that the indiscriminate methods used for the management of predators on livestock farms has led to the excessive removal of not only targeted species, namely, leopards, caracals and black-backed jackals, but a plethora of other non-target species in the process (e.g. bat-eared foxes, mongooses and a variety of small antelope). A survey conducted by the CLT showed that 85% of the animals killed on a commercial sheep farm were non-target species. The current management regime used over the past 350 years by most farmers to control predators through removal/killing has adverse consequences on biodiversity and the viability of small stock farming, and has not worked. South African government agricultural bodies still claim (exaggerated?) stock losses of over R1.3 billion due to predators (South African Parliamentary Committee Meeting, 2 Nov, 2010). As a result we set up our Namaqualand Project to address many of these issues.

The Cape Leopard Trust Eco-Rangers Project has the potential to revolutionise small livestock farming by giving an economically viable solution to farmers while at the same time ensuring that the human activities on their land are sustainable in the long run and no longer be a threat to predators or overall biodiversity. The project aims to scientifically demonstrate the efficacy and economic viability of livestock management using specially trained herders (Eco-Rangers) in conjunction with shepherd dogs, by self-managing a commercial sheep farming enterprise. A

commercial sheep with 350 sheep was made available to the CLT for the experimental phase of the project. However, due to irreconcilable differences with the land-owner, the project, due to start on 1 January 2012, was terminated.

Looking Back - 2011

1. Seven Eco-Rangers were trained in partnership with Conservation South Africa (CSA) using Cybertracker devices - hand-held GPS field data collection devices with a simplified user interface for capturing field observations. Five Eco-Rangers are currently collecting Cybertracker data for a baseline study in the area, four working on communal land and one on a commercial farm as part of the Biodiversity and Red Meat Initiative of CSA. To-date, 2819 observations have been recorded.

2. Infra-red camera traps were deployed on the experimental farm to record faunal presence. Thirty-one different species including jackals and caracals were observed.

Looking Forward - 2012

We are currently looking to move this project to a new location in the Karoo. Once a collective of willing farmers will allow us to work with them, we will re-launch the project with full vigour.





Education and Outreach Programme



In partnership with:



Funded by:



The Cape Leopard Trust's (CLT) Environmental Education Programme has had a successful year of growth. The Programme aims to provide people, particularly children, with experiences that connect them with the natural environment, instilling an interest in the wonders and value of nature. This relationship between people and the environment is crucial to the wellbeing of both.

Environmental camps, held at Matjiesrivier Nature Reserve's "Tok-Tokkie" camp in the Cederberg, are our main focus as the extended time period and complete immersion in the wilderness leaves an indelible impression on the minds of participants. However, we also provide day trips, both in the Cederberg and in the mountains surrounding Cape Town, and conduct presentations at schools regularly.

A significant factor in the growth of the CLT's Education Programme has been due to the sponsorship of the National Lottery Distribution Trust Fund (NLDTF) and the consequent full-time employment of an environmental educator and bus driver, Matthew Dowling. This has led to the solidification of the Cederberg camp programme as well as the expansion into Cape Town as Matthew and the bus (see below) are based in Cape Town.

Sponsors

The CLT Education Programme has made the most of the incredible support of the National Lottery Distribution Trust Fund (NLDTF), with their three-year grant of over R1,3 million. The purchase of a 21-seater Mercedes bus with NLDTF funds has made a significant difference to the successful running of the Programme, both in providing affordable transport to groups for camps, and in making it possible to run environmental day trips in the Cape Town area. Our thanks go to a number of generous people and companies who have added to the value and usefulness of the bus: Rola Motors (Helderberg); Strand Fitment Centre; Bandit Vehicle Tracking; Achievement Awards (Westlake); Bridgestone Tyres; David Knott; Venter Trailer Sales; Superquick (Century City); Mixed Media; Impressions Screenprint.

Due to the generous discounts offered by Hi-Tec and Cape Union Mart, we have been able to use our NLDTF funds to the maximum, purchasing hiking shoes for use by children attending camps as well as overnight hiking equipment such as backpacks and sleeping mats. Energizer assisted us with headlamps. We are very grateful for this support.

We are also grateful recipients of K-Way gear, which has proved invaluable in the field.

Environmental Camps

Our campsite at Matjiesrivier, in partnership with CapeNature, is a wonderful venue from which to run the environmental camps. We are pleased to say that the number of camps has nearly doubled this year, and we have continued to host groups from a wide variety of backgrounds. Feedback from the camps has been excellent and we are convinced that we are providing experiences that are valuable to all participants.

Group	Age	No.	Sponsorship
SUN reptile group	Young adults	35	None

Cederberg community farmers	Adults	17	Full
Women's camp	Adults	15	Partial
Malmesbury Camphill	Adults	17	Partial
Centre for Creative Education	Adults	22	None
Ikamva Youth	Teenagers	25	Partial
Namaqua Eco-Rangers training	Adults	12	Full
Biomimicry Camp	Adults	18	None
St Augustine's Primary	Grade 7	16	Partial
Muizenberg Beach Club	Grade 6 & 7	19	Partial
Wupperthal School	Grade 9	28	Full
Eselbank Primary	Grade 4 - 6	14	Full
Hout Bay High & Chumisa Eco-Club	Teenagers	20	Partial
Dwarsrivier Primary	Grade 4 - 7	13	Full
Michael Oak	Grade 7	30	None
Elizabethfontein School	Grade 7	30	Full
Cape Union Mart sponsored SAEP camp	Teens and adults	25	Full
Michael Oak	Grade 9	29	None
Stellenbosch Waldorf	Grade 6	26	None
Stellenbosch Waldorf	Grade 8	26	None
Imhoff Waldorf School	Grade 6	29	None
Gereformeerde Laerskool	Grade 6 & 7	31	None

Each camp has a unique programme, tailor made for the needs of the group. We would like to share some highlights of 2011:

During the camp for the local Cederberg school of Eselbank, the children joined the CLT's Black Eagle researcher, Megan Murgatroyd, on a walk to a kloof with a Black Eagle nest on a cliff. Colloquially known by derogatory names such as 'lammervanger' ('lamb catcher') or berghaan' ('mountain chicken'), Black Eagles are in fact masters of the sky, and are apex predators such as leopards are on land. The children were entranced as they witnessed both the soaring flight of the parent eagles, and the chick perched on its cliff nest. They were able to use Megan's special telescope for a closer view.



Children from Eselbank catching a glimpse of Black Eagles

For the third consecutive year we have hosted a sponsored camp for the Grade 9's from the Wupperthal School. It is wonderful to see how the school has responded with such enthusiasm and made the CLT environmental camp part of their school year. Wupperthal is situated in the heart of the Cederberg, and it is therefore particularly important to us that these children are involved in our programme. It has been very heart warming to see how well the children have responded each year. A highlight for us was when they broke into song in the magnificent Wolfberg Cracks, in awe of the space and the beauty.



Pleased with their find of klipspringer hair

To see a group of teenage city girls bundu-bashing through thick vegetation on a mountain slope is very satisfying to an environmental educator. There's something about not being on a path that wakes up all the senses and this, in itself, is a fantastic lesson in awareness. The Hout Bay girls eco-club, fortunately kitted out in the Hi-Tec hiking shoes sponsored by the NLDTF, were searching for a leopard kill site using the GPS data collected from one of the collared leopard's GPS collars. The aim was to find where the leopard had spent several days in one place feeding, and to find the remains of the animal that it ate. These data then go towards credible scientific research, so the children are actually helping with valuable research.

We planned a lovely challenge for the children from the Dwarsrivier School who are already quite familiar with the natural surroundings in the Cederberg through their



walks with us – we took them for an overnight hike where they had to carry their own sleeping things and sleep out in a cave on the mountain. Thanks to the hiking bags and mats sponsored by the NLDTF and given to us at an excellent price from Cape Union Mart, we are now able to include overnight hikes in our programmes. The children were so excited to be proper hikers, and set out full of giggles and determination, leaning on the walking sticks they had just

made for this purpose and happily wearing the new sponsored Hi-Tec hiking shoes. We had a wonderful time out, with all the children snuggled close together for warmth for the night in the cave.

Camps for Adults

We successfully repeated 'The Leopard Within', a long weekend camp for women in the wilderness, once more using the leopard as a metaphor, examining its qualities and developing them in ourselves. There were women from the local Cederberg communities, as well as from various parts of the Western Cape – a diverse and wonderful group.

An important camp held early in the year was for community farmers from the Cederberg. The camp was set up in partnership with CapeNature, with participants from their Damage Causing Animal Programme. The participants, all from small villages in the Cederberg area, do small-scale livestock farming on communal land. Trapping and snaring of predators as well as other wildlife for food is prevalent in these communities. The weekend was very effective in bringing new ways of thinking about nature and practical ideas on implementing livestock management practices that relieve conflict with predators. The farmers participated with great interest and really engaged with the subject matter.



Examining a baboon-proof fence (left) and fresh leopard tracks (right)

Cape Town Activities

This year saw the start of the Cape Leopard Trust's Education and Outreach Initiative in Cape Town which is proving to be full of possibility. The landscape of the peninsula as well as the abundance of indigenous plant and animal life provides us with a plethora of educational materials. As with all birthing processes, our new program has not been without hiccups and disappointments, but the support has been forthcoming and our vision to be a generous provider of quality environmental education in the Greater Cape Town area is slowly coming into fruition.

A massive advantage of being based in Cape Town is the opportunity for networking, meeting other role players in the environmental education field and forming working partnerships with them. We have the warm and sincere support of major role players like CapeNature and SANParks as well as that of NGOs such as AfriOceans, Educo Africa, I Am Somebody, WESSA and SaveOurSeas.

One of the highlights of 2011 for us was linking up with the NGO 'I am Somebody' (IAS) who are involved in the empowerment of communities, showing participants that there is power in themselves, in their communities and in their environment –

done through storytelling, poetry and games. The IAS team ran a workshop with some young men who grew up on the streets and we were asked to give the “environment” aspect to the three day course with a “self” day and “community” day on either side. Observing the personal developments that were taking place it appeared that their personal struggles were comparable to that of young male leopards’. The need to establish one’s own territory (be it literal or figurative), attract a suitable (and available) mate and the constant and often aggressive competition from other males is something that young male leopards have to endure alone for years until they reach success or ultimate failure. These young men with such rough pasts were really taken by this description and started showing genuine gratitude when they realized that they were not suffering this trial alone, that they had comradeship. Is this Environmental Education? Just think of the emotional bond that was created between these youth from the streets and the graceful wild cats in the mountains.

During the times when we are not busy with camps in the Cederberg, we are now able to offer environmental day trips in Cape Town. The themes of these outings are varied, and those this year have included geology, fauna of Cape Point, caves, bats, water, and general environmental exploration. We have also started to offer holiday programmes where children can join us for a week of daily environmental adventures that sets out to explore the biodiversity of the Cape Peninsula. For those able to pay, this provides financial benefits invested in helping disadvantaged participants.

Challenges and Plans

We are challenging ourselves to run our camps at maximum capacity in 2012 and to keep adding new and interesting experiences to the camp programmes. It has been a great benefit including the Black Eagle research into our programmes this year. We look forward to integrating new research in the Cederberg into our camps and are therefore very excited by the prospects of the klipspringer and caracal student projects planned for 2012.

In order to reach younger children, we plan to produce a children’s storybook/activity book that introduces children to the Cape Leopard Trust, as well as explaining the importance of conserving animals, the important role of predators and to encourage readers to take interest and pride in the natural environment.

We would like to focus on increasing the number of groups taking part in the environmental day trips in Cape Town and to increase our presence in schools through presentations and posters. One of our main visions in the Cape Town area is to co-create a culture of clear environmental awareness across the city. We wish to instil a sense of awe and wonder by showing people what still remains of this unique habitat and what we can do to preserve it and even restore it in places that have been damaged. A pilot project is being started with the schools of the Kommetjie and Ocean View areas where we are going to take on the study and rehabilitation of the local river, which is not supporting the diversity of life that it potentially could. We have teamed up with a UCT researcher who is passionate about the apex predator of these waterways, the Cape Clawless Otter. Just as we use the leopard to explore the ecosystems of the Cederberg and the Boland so too can we base our studies of Cape Town waterways on the otter and the fragile systems that it depends upon. It is our hope that through projects like this one we

can really start to have an effect on the destructive aspects of modern culture and in return give communities the priceless gift of natural beauty.

Thank you to everyone who has supported the work of the Education Programme in the past year. Special thanks to our main sponsor, the NLDTF; to our other sponsors; to Cederberg landowners and to CapeNature. Our sincere gratitude for the help and support that we have received in Cape Town from our newfound partners as well as those volunteers who have given of their time to assist us. In particular, we would like to acknowledge: Nicole and Toni (I Am Somebody!); Nolene Mafakala (SANParks Westlake); Sarah Dowling; Sandy Dowling; Julius Seemayer and Nicola Okes.



Cape Leopard Trust Main Sponsors

We would like to thank all the sponsors of the Cape Leopard Trust, who have done so much to aid our project through their generosity. Below is a list of our main project sponsors. Please refer to our website sponsors list for all our donors and sponsors http://www.capeleopard.org.za/sponsors/current_sponsors.html.



Cape Leopard Trust Board of Trustees

Dr Andrew Baxter resigned as CLT Board of Trustees Chairman in December 2011. We wish him well with his new endeavours after contributing a significant proportion of his time in supporting the Cape Leopard Trust as the Chairman since 2004. He dedicated a great deal of his free time to the project. Thank you!

We also welcome on board Professor Les Underhill, Director of UCT's Animal Demography Unit (ADU), and welcome Peter Lloyd back on board again.

We are pleased to announce Johan van der Westhuizen (co-founder of the CLT) has taken on the new position as Chairman.

Our current Board of Trustees is:

Johan van der Westhuizen (chairman)
Professor Chris Henshilwood
Peter Lloyd
Dr Ian McCallum
Dr William Horsnell
Dr Quinton Martins
Professor Les Underhill

Thank You

On behalf of the staff, Trustees and our precious environment, thank you for your generous support of our work.

Best wishes for the New Year.

Yours Sincerely,
Quinton



Quinton Martins
Cape Leopard Trust Project Manager