

I am wearing two hats today, that of psychologist, and that of the inaugural secretary of the Cheetah Conservation Fund Australia. I have to admit I have struggled to juggle both hats at once, and the cheetahs have a tendency to take over. So if I start ranting about how cute cheetahs are, please start waving your arms wildly to bring me back to task.

The importance of iconic animals

The human psyche is focussed on uniqueness. We have a fundamental belief in how special we are, and how special are the groups we belong to, including the human species. So although every species which faces extinction deserves to be saved, we attach more importance to those who are unique and iconic, in the same way that we grieve more over those humans, such as artists, who are special due to their talents, than for those whose achievements are more mundane. This sometimes leads us to neglect the importance of every cog in the wheel. We are an integral part of our environment and cannot exist without it.

But there are good reasons for us to focus on the iconic. By highlighting the beautiful, the exceptional, we find reasons to stand up against exploitation and defend the future of our environment and the very world we live in. In fact, without iconic animals such as whales or pandas, it is arguable that as a society we might be much less committed to conservation. This, incidentally, is an area worthy of further research!

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The Thylacine is a case in hand. Although many other Australian species have been lost, the thylacine, more than any other, can galvanise us into fighting to prevent extinction, to the extent that efforts are being made to clone it from genetic material - closing the stable door well after the horse has bolted!. This is partly due to our collective guilt for our role in its disappearance, but it is also connected to the thylacine's unique niche in the Australian environment as a medium to large marsupial carnivore. The thylacine has become a symbol of the importance of conserving Australian native species.

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For the most vulnerable and threatened of continents, Africa, the Cheetah is one such species. It was depicted in ancient history, having lived in domesticity for at least 5000 years (nearly as long as our familiar cats) - the Sumerians and the Egyptians used it as a hunting cat. It is a symbol of grace and speed. It is powerful, yet fragile, like nature itself. It is the only extant member of the genus *Acinonyx*. Such animals are part of our collective unconscious.

Why is the cheetah special?

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The cheetah is iconic in many ways. It is the world's fastest land animal and Africa's most endangered cat. Uniquely adapted to sprinting, the cheetah is capable of reaching speeds greater than 110 kilometres per hour in just over 3 seconds - an acceleration faster than that of a Ferrari - and at top speed its stride is 7 meters long.

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Spine and stride

The extreme flexibility of the Cheetah's spine is unique. The shoulder blade does not attach to the collar bone, thus allowing the shoulders to move freely. And, the hips pivot to allow the rear legs to stretch further apart when the body is fully extended.

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Feet and claws

Cheetahs' foot pads are hard and less rounded than that of other cats, functioning like tire treads providing them with increased traction in fast, sharp turns. The short blunt claws are semi-retractable, closer to those of a dog than of other cats. The claws work like the cleats of a track shoe to grip the ground.

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Tail

The Cheetah's long muscular tail has a flat end that works like a rudder, stabilising, and acting as a counter balance to its body weight. This allows sudden sharp turns during high speeds chases.

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Stripes and spots

Adult cheetahs are easily distinguished from other cats by their solid black spots. The colour and spots imitate the dappled light of the savannah, thus helping cheetahs hunt prey and hide from other predators.

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Up to the age of three months, cheetah cubs have a thick silvery-grey mantle down their back. The mantle helps camouflage the cubs by imitating the look of the honey badger, a small but fierce and fearless inhabitant of the African savannah. Most animals, even larger and stronger, will avoid confrontation with this aggressive species.

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The King cheetah was originally believed to be a sub-species, but genetic research has established that this unique pattern, where spots meld into stripes, is in fact a mutation.

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Tear marks

Distinctive black tear marks run from the inner corner of the eyes to the outer corners of the mouth. The stripes are thought to protect the eyes from the sun's glare and function as a rifle scope, helping cheetahs focus on their prey.

AUDIO FILE

Cheetah vocalisations

The cheetah cannot roar like the other African big cats, it chirps. But most appealing of all its characteristics, is that the it purrs, just like your moggie back home!! No wonder cheetah encounters are a star attraction in many zoos.

A bit of history: the road to extinction

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The Cheetah was once widely distributed throughout Africa, the Arabian Peninsula, Asia Minor, and even the East of India. Fossils are recorded in China, Northern India, Southern Europe, and as far as the Western United States. Sadly, the cheetah is now sparsely scattered across a handful of African and Asian countries. The cheetah has suffered a dramatic 90% decline over the past century, becoming extinct in twenty countries of its original range. In 1900 there were over 100,000 Cheetahs, in 1970 the numbers plummeted to 25,000, and today there are only 10,000 cheetahs left, one tenth of which live in captivity. The remaining population survives in Africa, mostly in Namibia (2,500), and a meagre 50 in Asia, mainly around Iran's Kavir desert.

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Illegal wildlife trade

For thousands of years, the ancient world's rich and royal kept cheetahs for hunting and as a status symbol. Because cheetahs do not breed well in captivity, they had to be caught from the wild, which is likely the leading reason that the cheetah is extinct throughout the majority of Asia. Today, there is still a high demand for cheetahs as pets and this illegal trade has become the major contributor to the cheetah's population decline. To supply the demand, cubs have to be captured from the wild and then smuggled to different parts of the world. The mother is often shot so the cubs can be accessed. Out of all the cheetah cubs smuggled, only one in six survives the journey, requiring even more cubs be captured to meet demand. Since there were more than 300 new cheetah cubs adopted as pets in the Middle East last year alone, the number of cheetahs lost is significant. Moreover, pet cheetahs often become sick due to lack of sun, exercise and appropriate nutrition.

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Human/predator conflict

It is not so much trophy hunting as the perception by farmers that the cheetah is a threat to livestock that jeopardises the cheetah's future. Due to expanding development, 90% of cheetahs now live on cultivated farmland. The cheetah is diurnal, and therefore visible, so it often pays the price for the leopard's deeds, as the nocturnal leopard is no longer around when the kill is discovered. As a result, cheetahs are either shot or trapped in cages where they might be left to die.

Loss of habitat and prey species

The Cheetah prefers to live in open grasslands, savannahs, and semi-desert which better accommodate its way of hunting - running as opposed to the stalk and pounce method. As wild lands are destroyed and fragmented by human expansion, the cheetah's available habitat is also degraded thus reducing the land's carrying capacity for cheetahs and their prey.

Cub mortality and the threat of other predators

Cheetahs do not fare well in national parks and wildlife reserves, which normally contain high densities of larger predators such as lions, leopards, and hyenas, all of which compete with cheetahs for prey and will kill them given the opportunity. A cheetah will not be an efficient hunter until about three years of age. Cheetah cubs kill less than 10% of the prey which the family feeds on. Cheetah cub mortality can be as high as 90%, 50% of which are killed by other predators.

Lack of genetic diversity

The other 40% fall victim to lack of genetic diversity. About 12,000 years ago, a mass extinction event occurred that eliminated 75% of the world's large mammal species. A handful of cheetahs managed to survive and were able to restore the world's population. However, the population bottleneck, resulted in the physical homogeneity of today's cheetahs. Poor sperm quality, malformations such as focal palatine erosion and susceptibility to the same infectious diseases are all ramifications of the low genetic diversity within the global cheetah population. Suitable levels of genetic diversity are vital to a population's ability to adapt and overcome environmental changes and unexpected disasters. When habitat is destroyed and fragmented, the rate of inbreeding increases, which leads to even more reduction in genetic diversity.

Conservation through captivity?

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The presence of cheetahs in zoos is controversial. Animal advocates contend that wild animals have no place in captivity. As a principle, this might be arguable, but ambassador cheetahs fulfil an important role in advocating for the survival of their species. Without them, a lot less effort would be made to ensure their survival in the wild. Cheetahs require large open spaces so they can do what they do best: run - they are only suitable to open range zoos and safari parks. Cheetahs are notoriously reluctant to reproduce in captivity, although some zoos and parks have discovered the behavioural secret to successful breeding. But lack of genetic diversity in the captive population is even greater than in the wild. Most importantly, cheetahs reared in captivity cannot ever be released. They are vulnerable due to habituation to humans, and they need interaction with their mother in the wild for at least 18 months to acquire the skills to allow them to hunt successfully and protect themselves from horned prey.

Why saving the cheetah is saving the world

Namibia is a special country. Not only is it the home of the largest remaining population of cheetahs, it has enshrined conservation into its constitution. Namibia is divided into conservancies, and the people in each conservancy are responsible for the management of its wildlife. This policy has had a significant impact on increasing wildlife populations.

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This is where Dr Laurie Marker founded the Cheetah Conservation Fund 25 years ago. What the CCF has done to save the cheetah is also saving Africa and its people. Most cheetahs in the wild live outside protected areas, alongside human communities. Securing a future for the cheetah means addressing its entire ecosystem, including people.

CCF has used sound psychological principles to convey to Africans what they can gain from cheetah conservation. The resulting model is one many other conservation organisations can emulate. Since its inception, CCF has not only provided a refuge and rehabilitation centre for rescued cheetahs, it has promoted research and educational campaigns, as well as assisted the population of Namibia to develop better farming practices and cottage industries.

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Livestock Guarding Dogs

The Cheetah Conservation Fund started the Livestock Guarding Dog program in 1994. The program has effectively reduced predation rates by 80% to 100%, and thereby lessened the inclination by farmers to persecute cheetahs. CCF breeds Anatolian shepherd and Kangal dogs. For a nominal fee (which gives them value) puppies are placed with Namibian farmers, where they bond with the herd and scare away potential predators. Farmers participate in education on how to train the dog. CCF does on-site follow up visits to ensure the dogs have proper training and medical care, and are settling into their guardian role. Farmers have enthusiastically embraced the program, and there is now a two year waiting list for puppies.

Promoting small cottage industries

The CCF has developed cottage industries to secure the livelihoods of the human communities that live alongside the cheetah. The Dancing Goat Creamery produces and sells dairy products made from CCF's goat milk. This is a new industry to Namibia and demonstrates to small livestock farmers a viable source of supplemental income. CCF is also undertaking efforts to produce honey via an apiary, and is experimenting in grape growing for winemaking.

Predator-friendly model farm

CCF operates a highly profitable model farm that raises sheep, goats and 1000 head of cattle, and features high quality "cheetah country" beef which is exported to Europe. It has researched and deployed predator-friendly farming methods, including herd and veld management, proper animal husbandry and the use of swing gates. The model farm has become an education and training tool for thousands of farmers throughout the cheetah's range.

Eco-labelling

CCF has been involved in promoting “predator-friendly” eco-labelling for the past 15 years, as it provides an incentive for producers to follow environmentally sustainable practices and charge a premium for their products.

Habitat restoration

As a result of unpredictable droughts, climate change, and certain livestock farming practices, native thornbush species are growing out of control. With 70 percent of Namibia’s population involved in agriculture, bush encroachment poses a major livelihood threat to communities, the cheetah and other indigenous wildlife species. In 2001, CCF started processing encroaching bush into high-heat, low-emission, compacted logs for use as a cooking fuel or for home heating. The Bushblock trademark has won awards, and is now an inspiration for researching ways of harvesting Namibia’s 10 million hectares of woody biomass which could power southern Africa with sustainable energy and employ over 5,000 Namibians.

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Education and training

CCF operates a Field Research and Education Centre to conduct formal and informal education programs. The Centre is open to the public daily and offers educational activities, programs for visiting school groups, and training for university students. It also runs school outreach programs, farmer education programs, international training courses and internships for foreign students.

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Eco-tourism

Through the work of CCF and other conservation organisations, Namibia has become a focus for African ecotourism. Tourists are attracted by the country's unspoiled beauty, its low population density and teeming wildlife, which, thanks to limited poaching, is visible everywhere, not just in game reserves. The survival of the cheetah is an integral part of the success of the eco-tourism industry in Namibia and many farmers now conduct safari tours on their land.

International outreach

CCF has been an active participant in the fight against illegal wildlife trade since 2005. In 2007, it became a founding member of the Coalition Against Wildlife Trafficking (CAWT). CCF has an outpost in the Masai Mara, Kenya, and has supplied, education, training and other resources to collaborating organisations in South Africa, Tanzania, Botswana, Iran and North West Africa.

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Field work

CCF investigates the movement of cheetahs to determine home ranges, habitat preference and seasonal use, territoriality, and behaviours unique to individual cheetah populations that may be critical for their survival. It develops and implements relocation, reintroduction, and non-invasive monitoring methodologies to ensure a viable wild population. CCF's on-going research includes studying the genetics and relatedness of the population, the incidence of disease, stress hormone levels, and the reproductive health of the population.

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Research

CCF is home to a world class research facility that is unique in Africa. It includes a veterinary clinic and life technologies laboratory, which is the only fully-equipped genetics lab in situ at a conservation facility in Africa. From this facility, CCF collaborates with scientists around the globe on research that not only benefits the cheetah and its ecosystem, but other big cats and predators as well. Trained scat-sniffing dogs help ecologists find cheetah scat in the field. DNA is then extracted in the laboratory to identify individual cheetahs and understand cheetah population structure. To provide insurance for the cheetah's survival, CCF has developed best-practice techniques for storing sperm, tissues and blood samples in its genome resource bank, one of the largest for any endangered species. Cryopreservation methods continue to be studied and refined in collaboration with the Smithsonian Institute.

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Resources and how to find out more

By visiting www.cheetah.org, you will find a wealth of research articles. If you wish specific references, there is a sheet for you to provide your email and make any specific request.

If you would like to join the Australian chapter of the CCF, you can visit our webpage, www.cheetah.org.au or our Facebook page. Membership is only \$20 a year, and I have membership forms here. I also have some copies of our recent newsletter, which illustrates some of our activities. (I will take questions for five minutes.) Please feel free to approach me during the rest of the day should you wish to discuss matters further.