

CHEETAH SPOTS

Cheetah Conservation Fund Australia

| Summer 2015/16

Recent study reveals secrets of cheetah genome!

It appears the cheetah has survived not one but two population bottlenecks over tens of thousands of years that could have led to its extinction. Go to page 3.

Preview of upcoming documentary!

Race to Save the Cheetah is a 40-minute documentary featuring Dr Laurie Marker and Cheetah Conservation Fund's fight to save the wild cheetah. It is due for release in April 2016. To wet your appetite, take a peak at this teaser: <https://www.youtube.com/watch?v=kM8Ro44tWKO>

Jamie Bonnar shares his anti-poaching experience

Although not directly cheetah-related, Jamie's story illustrates the fragile nature of Africa's wildlife and the bravery of those who defend it. Please read on pages 5 and 6. Thank you Jamie!



Cheetah Lady's First Australian Tour

Cheetah Conservation Fund Australia is proud to announce Dr Laurie Marker's visit to Australia.

Laurie Marker, who is to cheetahs what Jane Goodall is to chimpanzees, is expected to make quite an impression in Australia. Read details on page 2!



Sydney

Dr Marker will be arriving in Sydney in the evening of March 1st. During her stay, talks at several universities have been lined up, and she will be interviewed for Sky News. A fundraising dinner, with a possible auction, is also planned.

Adelaide

Dr Marker will leave Sydney for Adelaide on Saturday 5th March. That evening, she will give a one-hour presentation, followed by a Cheetah Celebration and Support Event, including cocktail food, live entertainment and a silent auction. We are expecting many items of value to be auctioned at this event, including but not limited to paintings and prints by well-known Australian artists.

On Sunday 6th March, Laurie will be driven to Monarto Open Range Zoo, near Murray Bridge, where she will visit the facilities and meet with the members of the Cheetah Conservation Fund Australia's committee, as well as staff at the zoo, before her next commitment.

At 2pm on Sunday afternoon, Dr Marker will inaugurate the Zoos SA Cheetah Learning and Discovery two-day event for cheetah professional in Australasia which will run on Sunday afternoon and all day Monday.

This will be an opportunity for a collaborative group of experienced people in captive cheetah management to meet and discuss cheetah populations both global and captive, the role of zoos

in cheetah survival and an overview of the international studbook, overview of the Cheetah ASMP, and success in captive breeding in the Australasian region.

Melbourne

Dr Marker will take an early flight to Melbourne on Tuesday 8th March, where she will start her day with a lunch-time presentation to 200 high school students. This will be followed by an evening presentation in the City.

On Wednesday 9th, our indefatigable Laurie will be talking to Conservation Biology students at LaTrobe University, before heading for a fundraising dinner.

On Thursday 10th March, Dr Marker will be addressing Melbourne University Vet School students at Werribee, before flying to Perth in the afternoon.

Perth

On arrival in Perth, Dr Marker will be whisked off to Murdoch University, where she will lecture Vet School and Wildlife Biology students.

Dr Marker will meet Federal MP Melissa Parke and will talk to students at John Curtin College of the Arts, before conducting a lunch seminar at the University of Western Australia's School of Animal Biology. In the evening, she will be the speaker at the Big Cat Big Party fundraising evening at the Orient Hotel in Fremantle.

More to come!



At this stage, some meetings, events and interviews have not been finalised and we are keeping them under wraps to avoid disappointment should they not eventuate. However, watch out for updates closer to the time, as more events are currently in the pipeline. A more detailed itinerary will be released closer to the date. Please check our Facebook page and our website at www.cheetah.org.au

Cheetah Genome Revealed

A new study this week found that the world's fastest cat has managed to overcome two population bottlenecks over tens of thousands of years that could have led to its extinction.

By sequencing the cheetah's genome, an international team writing in the journal *Genome Biology* concluded that the first one came 100,000 years ago when *Acinonyx jubatus* first migrated out of North America across the Beringian Landbridge to Asia and then eventually south to Africa. This was a time when all the Pleistocene megafauna went extinct, including sabretooths, mammoths and the woolly rhino.

The second bottleneck came around 10,000-12,000 years ago, further reducing its numbers and causing a major reduction in the gene pool that remains today.

To understand its evolutionary history, researchers, who also included members of the Beijing Genomics Institute and the Cheetah Conservation Fund (CCF), sequenced the genome from a male Namibian cheetah named 'Chewbaaka', and six other wild cheetahs from Tanzania and Namibia.

The cheetah's genome was found to be in poor shape, resulting in elevated rates of juvenile mortality and the extreme abnormalities in sperm development and increased vulnerability to infectious disease outbreaks. The variation in the cheetah genome is far below that observed in inbred dogs and cats, with researchers showing that the cheetah has lost 90-99 percent of the genetic variation typically seen in outbred mammals. This is so low that the population must have been reduced to inbreeding with close relatives because there was no one else left to breed with.

Most cat species have only 30 percent of sperm malformed while the cheetah has around 80 percent.

But the cheetah's genome isn't completely flawed. The researchers also found genes that demonstrated just why the cheetah has evolved to be the fastest land animal. Natural selection and adaptation of genes involved with energy metabolism and stress response are probably associated with the development of an aerodynamic skull, large heart muscles and other physiological characteristics that lend the cheetah its speed.

The researchers hope that their findings can help to ensure the cheetah's survival. Cheetah numbers are declining - they have fallen 90 percent in the past 100 years - mostly due to a loss of habitat, illegal trade of the live animals and death from illegal hunters, angry farmers as well as motorists hitting them on highways.

"Sequencing the cheetah genome illuminates our understanding of the species' evolutionary past and aids us in efforts to sustain and increase cheetah populations in their present and former range," said Laurie Marker, the founder and executive director of the CCF and a co-author on the study. "Although human intervention has caused many problems for the cheetah, humans also have the ability to change the cheetah's future."

The genome - as flawed as it is - offers plenty of hope these speedy cats. There has been 2,000 generations where the cheetahs have risen up to hundreds of thousands following the last bottleneck. That means they are able to overcome

these problems and have offspring. All of these genetic and reproductive problems are not a death sentence but actually demonstrate that the cheetah is a success story for overcoming them.

Article summarised from Fox News.

Download the full paper from here:

<http://cheetah.org/research/genomic-legacy-of-the-african-cheetah-acinonyx-jubatus/>

Jamie's Wildlife Defender Experience

I made my first trip to Africa in April 2013. During this time I was fortunate to volunteer with CCF in Namibia and I also went on Safari in the Maasai Mara, Kenya, and to Rwanda to see the Mountain Gorillas. During this holiday my love for this magical place formed and it was not long after coming home, that I started to plan my return trip.



Together with my wife, I planned our holiday around 'The Great Migration' of wildebeest and zebra. We travelled to

the Northern Serengeti, Tanzania arriving at the beginning of September. Over the next 5 days we were fortunate to have a front row seat as the wildebeest crossed the mighty Mara River as they followed the rains north, with their young to the Maasai Mara. It was also here that I had direct experience of the threat of poaching to the local wildlife. Whilst out enjoying the afternoon on safari we came across a helpless wildebeest caught in a poachers snare. After convincing our guide that it wouldn't be a good idea for a lone Aussie to go one on one with a trapped wildebeest, I was soon accompanied out of the jeep and our rescue was underway. Fortunately my wife captured it all on video so you can see how our rescue went here <http://youtu.be/Dg65SXnWdmw>

After our holiday in Kenya was over it was time for my wife to return home and for myself to travel to Zimbabwe to spend two weeks with the International Anti Poaching Foundation as a volunteer. As I have grown older, I have always tried to support likeminded businesses/people in whatever way I can, whether it be by staying in Camps that support wildlife organisations (whilst in Kenya we stayed at Governors Camp who do terrific work with local schools, The David Sheldrick Wildlife Trust and also an organisation close to our hearts - The Mara Meru Cheetah Project) or visiting places/organisations as a paying volunteer. After leaving the luxury of our 2 week 'glamping' safari in Tanzania & Kenya, it was time to go behind the scenes and meet the people that are protecting the wildlife we love so dearly.

Anyone who is familiar with anti-poaching will know the name Damien Mander and the organisation he created - IAPF. Located on the Stanley and Livingston Game Reserve on the outskirts of Victoria Falls, people can volunteer as part of their 'Green Army' and be integrated into the life of an anti-poaching ranger.

On arrival at the camp it was time for our orientation and after knowing what to do if confronted by one of the reserve's many animals it was time for an afternoon patrol. Patrols are done in the morning and afternoon and could take anywhere from 2-3 hours each. Walking for up to 6 hours a day was tough and with every new blister on my foot I had a newfound respect for the people that do this on a daily basis. Hours could go by and you may be happily enjoying your walk through the African bush but that could stop in an instant when a ranger points out anything from a Rhino who could be no more than 30 metres away to an Elephant or even a Lion.



Whilst patrols took up the bulk of our time we also sat in on classroom discussions on anti-poaching tactics, first aid and also learned many other aspects

of poaching such as the pro's and con's on the legalisation of the trade in Ivory. We also got to enjoy many practical assignments with the anti-poaching rangers from snare sweeping, tracking to my favourite which was playing the role of a poacher and breaking into the park whilst the rangers had to track and then interrogate us.

After a long day under the African Sun it was always enjoyable to share a sundowner with your fellow volunteers as you created new friendships. The weekends were free for you to enjoy in the town of Victoria Falls which I made use of by white water rafting down the Zambezi river and also taking a helicopter flight over Victoria Falls itself.

After my two weeks was up it was time for my second African holiday to come to a close. I cannot recommend a volunteer experience like this one

enough. The majority of people will never know what goes on behind the scenes of Africa's beautiful but fragile wildlife. The hard work, the sacrifice and at times the risk that rangers take in protecting the magnificent animals from the greed of mankind.



Cheetah Wine Better Than Ever!



Make sure you order your celebratory drinks at www.goodwillwine.com.au. Select a charity, Cheetah Conservation Fund Australia of course, then select your case of wine - these are superb vegan wines and, in view of the quality, represent good value! Every case you buy puts \$20 in our coffers!