

MY JOURNEY TO CAMEL SCIENCE: AYRES ROCK TO ABU DHABI

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ABSTRACT

An obsession with unusual animals led me to pursue a veterinary career as a Zoovet only to end up in specialising in one “exotic” species, the camel. This interest led me to initially be involved with chasing wild Australian camels in the Australian desert and then being employed to manage the world’s longest animal endurance race in 1988. As a result of this I was offered the opportunity to go to Abu Dhabi where I could truly “specialise” in many aspects of veterinary medicine with this incredible animal.

Key words: Camels, cloning, embryo transfer, racing

I didn’t find camels, they found me. My dream job out of Melbourne University in 1977 was to be a “Zoovet” having been obsessed with snakes, lizards, frogs and our Australian marsupials as a teenager. My heroes were Gerald Durrell and zoovet David Taylor so I found myself extremely lucky to apprentice at both Taronga and Melbourne Zoo under the watchful eyes of Dr Ted Finnie and Dr Ray Butler in my last two years of my Veterinary Science degree at Melbourne University. Imagine my delight to get my first job out of University in late 1977 in nearby Bacchus Marsh, splitting my time between being a mixed practice veterinary assistant at the Bacchus Marsh Vet Clinic and the Bacchus Marsh Lion Safari as their first ever veterinarian. The name itself was misleading as the establishment, set on about 200 acres of land not far from Melbourne, boasted not only lions, but a menagerie of creatures including tigers, buffalo, many species of monkeys, various gazelle, crocodiles, marsupials and of course a good number of dromedary camels.

Australia and my “Early Camels Days”

Nothing could have prepared me for the “Lion Park” despite it being my dream. When things went wrong at the park it was always on an epic scale. The gate between the Tiger and Lion enclosures being left open, escaping baboons, not to mention the Himalayan Tahr and Barbary Sheep jumping the fences to escape to the Australian Bush. Looking back the camels were the “easy” animal in some ways. I do remember however, my first camel anaesthetic, having called Dr Ray Butler and being told he’d

never had to do one on a camel, I experimented with my Tiger/Lion combination only to watch the camel stagger around in circles for 5 minutes before rolling 40 metres down an incline. I learnt one thing quickly, they were tough! Fast forward two years later and I had left Bacchus Marsh and had set up practice on the Southern Gold Coast at Tweed heads with friend and colleague Dr Doug Cluer. Truth be known we chose the location because the surfing was great, but also there was a large private zoo nearby at Coolangatta which certainly provided a lot of challenges for me, even if they didn’t have any camels. But the Gold Coast and Northern NSW environs had several camel owners and word got around that I had some experience. A camel character called Paddy McHugh sought my advice and treatment on several occasions and soon I discovered there was a big event being planned for the 1988 Bicentennial of Australia. The world’s longest Animal Endurance event, a 3,250 km Camel race from Ayres Rock to the Gold Coast with \$100,000 prize money and a documentary film crew to boot, showing off the adventure and dramas while trying to turn us into “movie stars”.

So, I took the risk and signed up to be Head Veterinarian and part time Race Director, dragging my wife Patti and two young daughters away from home for 5 months to prepare for and then supervise 69 camels and 170 odd people in the most insane adventure of our lives. Paddy and I embarked on a few trips to the wilds of Central Australia with the purpose of catching wild camels and training them and looking at their physiology regarding training

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for a long-distance race. I had to come up with a set of racing rules like that of endurance racehorses, that would protect the animal's welfare. The race would be broken into stages with separate prizes plus a major cash prize for the overall winner. We all survived the ordeal and so did the camels and the race was documented in a film unsurprisingly called "The Great Australian Camel Race". However, it was that during the ordeal a famous horse trainer and movie identity, Mr Heath Harris appeared out of the Australian Desert Sands to change my life forever and to offer me a job in Abu Dhabi helping to set up a Camel Hospital and Research Institute working for then the Crown Prince, H.H. Sheikh Khalifa Bin Zayed Al Nahyan. Obviously, I had to finish the race first, but having done that we jumped at the chance for an adventure overseas, even if we weren't quite sure where Abu Dhabi was!

Abu Dhabi and "Real " Racing Camels

I arrived in Abu Dhabi with Doug Cluer and Heath Harris in September 1988 thinking I knew something about camels. It was made clear very early that our job was to make His Highness's camels the fastest on the Arabian Peninsula. However, it was clear the athletic ability of a 700 kg Australian Camel walking and trotting over hundreds of kilometres at a time was very different to a 350 kg Arabian Racing Camel racing over eight kilometres. We were comparing pickup trucks to a Ferrari. We needed a plan and so started my scientific journey into the world of elite "Arabian Racing Camels" (Saltin and Rose, 1994)

We developed a two-pronged approach. Our main competition had faster camels and more of them. So, we needed to "Breed Better" and "Race Better". Before we knew it we were working with world famous horse and human exercise physiologists, Professor's Reuben Rose, David Evans and Bengt Saltin. We had camels running on treadmills on 3 degree inclines at 30 km an hour. I'm not sure who was more nervous, Doug and I or the camels. At the same time we started our pioneering work in assisted reproduction with world expert and friend Dr Angus McKinnon, we were busy that's for sure.

Things moved very swiftly particularly with our reproductive achievements. First we managed the world's first birth of a camel calf from embryo transfer in January 1991, followed by first multiple E.T. calves born from champion female Sumha, six calves born in April 1991 (McKinnon *et al*, 1994). Frozen Embryos resulted in a first E.T. birth of two camel calves on

13th of February 1995 and then in March 2001 we produced identical twins (Fig 3) from splitting a single hatched blastocyst (Tinson *et al*, 2001).

Further advances occurred with our general facilities and in 2008 we built a purpose-built surgical facility (Fig 4) which allowed us to deal with various racing injuries and reproductive challenges (Tinson *et al*, 2014). We continued with more work in artificial insemination (A.I.) and reported a few births from frozen semen using A.I. (Tinson, 2013). Interestingly the surgical facilities became central in our cloning research that started in 2019 in collaboration with our Korean colleagues led by Professor Hwang Woo Suk. We were using laparotomy techniques to collect oocytes and surgically transfer cloned embryos. This work is now being taken on as a "commercial" project producing up to 300 cloned pregnancies a season. The "resurrection of Mabrokan" was probably our "crowning" achievement resulting in the birth of 11 cloned camel calves from a famous male beauty camel "Mabrokan" that had died in 2010, and subsequently cloned embryos were created from stored skin fibroblast DNA (Hossein *et al*, 2021) (Fig 5 and 6). In terms of my scientific journey, it is hard to compare any of it to the first moment I held the first born Mabrokan calf in my arms knowing he had died 10 years earlier and yet here he was "Back in Black" (as the A/C song goes!).

My last five years has seen me step away from racing to a certain extent and concentrate more on our commercial E.T. and Cloning projects which keep Dr Rajesh and myself extremely busy 6 days and week 6 months of the year. But the good news for our bosses and us is that the "Breed Better and Race Better" strategy we started 38 years ago has definitely born fruit as one can see from Fig 7 which shows our trophies from the 2024/2025 racing season.

Publications

Clearly a big part of the scientific journey has been also documenting our work and trying to contribute to information on this incredible animal. Our first contribution was courtesy of being invited to present at the World's First Camel Conference in Dubai in 1992 (McKinnon and Tinson, 1992). My colleague Geoff Manefield and I wrote "Camels A Compendium" with Sydney University in 1997 and more recently writing "The Camel, The Animal of the 21st Century" in 2017. Speaking at numerous conferences around the world has been central to the journey, sharing information and making new friends in the camel community. A visit to Iran to lecture at



Fig 1. Start of Camel Race 1988- 3,250 km.



Fig 2. Camel Catching Central Australia 1988.



Fig 3. Twins at Hilli 2001.

Tehran and Shiraz Universities in 2002 (Courtesy: Professor Amir Niasari-Naslaji) was a highlight and other excellent conference organised at Bikaner (Courtesy: Dr. T.K. Gahlot). On a tangent to my writing interests, I have also managed to write a series of children's books about "Harry the Camel", but I guess they remain more of a mental health diversion than a scientific one.

HEFFoundation and Overseas camel interests

Through my interest in camels, I undertook setting up a foundation to sponsor camel projects in



Fig 4. Hilli Surgical Facilities.



Fig 5. Dr Rajesh, late Dr Kuhad, myself and Amit Kumar with 5 Mabrokan calves "brought back from the dead".

other countries. Hef foundation (Harry's Endangered Friends Foundation) was set up in the mid 90's and managed to play a role in some environmental projects such as working with Mr John Hare and the Wild Camel Foundation in Mongolia along with



Fig 6. Mabrokan and me in his prime prior to his death in 2010.



Fig 8. Riding a pure white Bactrian camel gifted to me on my first visit in 2002.

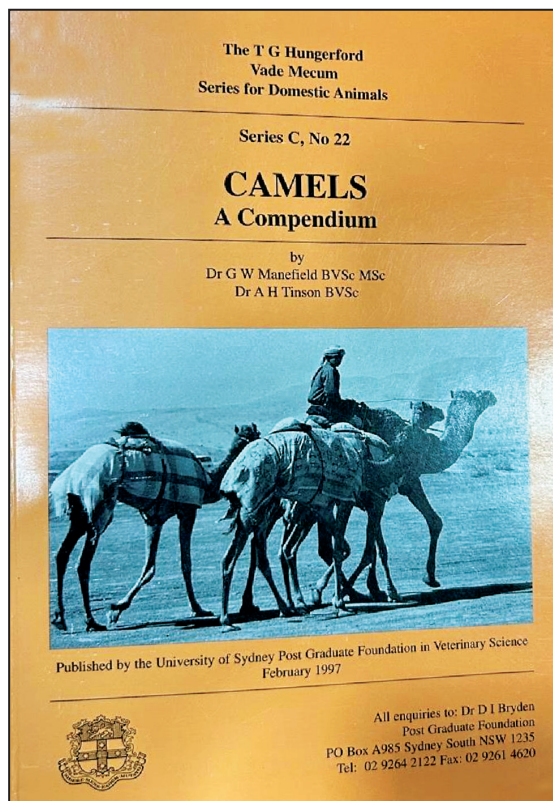


Fig 10. First Camel Text 1997.



Fig 7. His Highness the President Sheikh Mohammed bin Zayed Al Nahyan, Sheikh Mansoor Bin Zayed al Nahyan, Sheikh Sultan Bin Hamdan al Nahyan camel trainers and the rest of the "Higgin Al Riasa" racing team with trophies from 2024-25 Season.



Fig 9. Large group of curious Bactrian camels near Bulgansomme in Gobi desert.

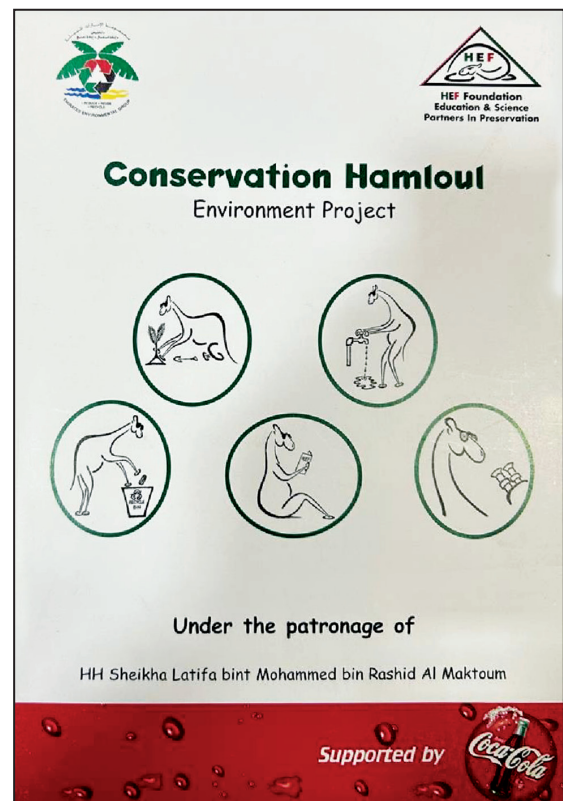


Fig 11. Schools HEF Project U.A.E. 2001.

Mr Batsuuri Lhagva from Ulanbataar Agricultural University. I was lucky enough to have several trips there to see the endangered Bactrian Camel project and experience the amazing people and geography before it became popular as a tourist destination. We also managed some interesting trips to India with late Dr Kuhad including visiting Nubra Valley in Indian Kashmir to see the Bactrian camels living there since the closure of the silk road during the 1960's.

Thirty-Eight Years later I am still there working with camels. I have been lucky enough to work on many pioneering projects from exercise physiology to race management and assisted reproduction including embryo transfer and cloning. I have been involved in a Camel Safari business with Doug Cluer, imported camels from Australia to the U.A.E. and even written children's books about camels. So, camels have truly taken over most aspects of my life. My oldest daughter Katya married her childhood sweetheart Khaled who is Emirati and I have four Emirati grand children, amongst my total of 10 grand children. I'm still living in the same house I arrived at in Al Ain in 1988 and still loving "the Camel Life" challenges and have somehow managed to document it all in my book "The Desert Vet."

Acknowledgements

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team in the U.A.E. adventure. Dr Angus McKinnon who supported our early efforts to pioneer assisted reproduction in the dromedary camel and most importantly the Al Nahyan Royal Family who supported and encouraged all our work no matter how unusual and crazy some of our requests must have sounded at the time.

References

- Hosseini MS, Yu X, Son Y-B, Jeong Y-I, Jeong Y-W, Choi E-J, Tinson AH, Singh KK, Singh R, Noura AS and Hwang W-S. "The Resurrection of Mabrokan: Production of Multiple cloned Offspring for Decade- Old Vitified Tissue Collected from a Deceased Champion Show Camel. *Animals*. 2021; 11:2691, <https://doi.org/10.3390/ani11092691>
- McKinnon AO and Tinson AH. Embryo Transfer in Racing Camels. *Proc 1st International Camel Conf.* Eds Allen WR, Higgins AJ, Snow D and Wade JF. Newmarket, Suffolk, UK R&W Publications (Newmarket) Ltd., 1992; pp 203-208.
- McKinnon A.O., Tinson A.H. and Nation G. Embryo transfer in dromedary camels. *Theriogenology*. 1994; 41:145-150.
- Saltin B and Rose RJ. The Racing Camel *Acta Physiologica Scandinavica*. 1994; Vol 150 Supplement 617.
- Tinson A. "First Frozen Semen Calf" Editorial in *Journal of Camel Practice and Research*. Vol. 20, No. 1 June 2013.
- Tinson AH, Kuhad KS, Singh KS, Sambyal R, Mugheiry A, Rahman and Al Masri J. Twinning in Camels. 6th Annual Conference for Animal Production under Arid Conditions. *Emirates Journal of Food and Agriculture*. 2001; 13(1):71-73.
- Tinson AH, Gray Peter, McKinnon Angus, Abdul Rahman, Rajesh Sambyal and Kuhad K Singh. Anaesthesia using Alfaxan and Isoflurane in two adult dromedary camels. XXXV111 Annual Congress of Indian Society for Veterinary Surgery and International symposium on New Horizons in Camel Surgery." 15th-17th Oct 2014; pp 13-20.