Roan Antelope Project

Roan Antelope (*Hippotragus equines*) are Africa's second largest antelope after the eland. Historically they were widely distributed in small herds over a large part of Swaziland. They became locally extinct when Swaziland's very last free-ranging roan antelope was poached at Maphiveni in 1961. Roan have become extremely rare across their entire natural range. The reason for their demise is probably a combination of factors which include poaching, diminishing range, stress-induced disease, predation, and competition by high density species.

A small group of 4 roan (3 females, 1 bull) reintroduced to Mkhaya from Namibia perished because, we now believe, the animals were naïve to tick-borne diseases in a densely tick hostile environment where mortalities overwhelmed recruitment. It is likely that the tick-borne *Theileria hippotragi* disease played a large role.

*Theileria* is a protozoal disease which is fatal to roan and sable antelope. The expertise of Dr Johan Steyl under the supervision of Prof. Leon Prozesky of the Onderstepoort Veterinary Faculty of the University of Pretoria has helped enormously with this project. The vector is the red-legged tick *Rhipicephalus evertsi*, which is abundant in Swaziland, but little was known about its impact on wildlife at the time of the Namibian introduction.

Our Roan Antelope project got underway in 2002 after Dr Hamish Currie, founder and chief executive of Back to Africa, very generously committed to assist in restoring a viable population of roan antelope to Swaziland. Dr Hamish Currie wisely harnessed the expertise of Dr Johan Steyl whose guidance has without doubt been pivotal to the success of the project so far.

Back to Africa is a non-profit organisation pursuing a mission to restore threatened and endangered species from successful zoos to wild African habitats where these species formerly existed. Zoos are increasingly subscribing to a philosophy of augmenting wild populations which have been depleted or exterminated in their former habitats. Such projects are known as *in-situ* conservation projects, and this concept has added enormous conservation and social value to the purposes of zoos.
Several zoos have contributed substantial sums of money to finance projects which are beyond our financial capacity to implement and sustain. To give an example of successful in-situ conservation projects which have saved species from certain extinction: the last remnant of Arabian oryx was caught in the wild and translocated to Phoenix Zoo, Arizona. So successful was this zoo in propagating Arabian oryx that founder populations have since been re-established in Arabia and Oman from nuclei the Phoenix Zoo. Here in Swaziland our own hippo population was started with the help of a hippo heifer donated by Whipsnade Zoo as a mate to a solitary bull at Miliwane Wildlife Sanctuary. The pair flourished and bred, and though hippo were later added from other sources, they are now a feature of all our parks.

After a great deal of preliminary planning, Dr Hamish Currie had an agreement between Back to Africa, Big Game Parks and Dr John Knowles OBE, founder of Marwell Zoo in Winchester, England. The agreement reached included the donation of 4 roan (1♂, 3♀) to the project, Back to Africa would sponsor the translocation from the UK to Swaziland, and Big Game Parks would commit to establishing a quarantine facility, all the required infrastructure to accommodate the animals and their maintenance. If successful in the first year, Marwell Zoo would repeat its donation with a further 1♂ and 4♀, and if these survived another year, an additional 6♀ would follow. This would then be sufficient to establish a successful founder population of roan in Swaziland.

The first consignment arrived at Miliwane Wildlife Sanctuary, on 24th December 2004. The following year in November, another 5 roan antelope (1 male and 4 female) arrived. A third and final consignment was due in December 2006. Unfortunately, after the retirement of Dr Knowles from Marwell Zoo, the new management reneged on the agreement and this final delivery did not materialise, leaving us with a total of 9 English animals which were 7th and 8th generation zoo-born. Two of these were bulls and one an unproductive cow, leaving us with 6 breeding cows.
In 2007 Back to Africa arranged the reintroduction of three more cows from Dvur Kralova Zoo in the Czech Republic, only one of which bore a calf which had to be hand reared because its mother did not have enough milk. So, of the total introduction of 10 roan cows from the UK and Europe, only 6 females were fully functional, and productive. From this small nucleus the population has grown to more than 50 animals as of the end of 2015.

Following Dr Johan Steyl"s advice, an additional two Roan bulls were purchased on a sale in 2010 to enhance genetic immunity to *Theileriosis* within the herd. These were animals from Percy Fyfe Game Reserve, very generously paid for by Corinne Itten's Comanis Foundation. The Percy Fyfe bull introduction took a whole year to attain compatibility with the cows, missing an entire breeding season.

The project so far is very promising, but what was initially thought to be a 5-year programme has turned into a 20-year programme. The foundation stock, which originated in Uganda, was DNA tested and confirmed to be southern roan as opposed to the western sub species.

The European Association of Zoos and Aquaria (EAZA) has endorsed this project unconditionally and so has the World Association of Zoos and Aquariums (WAZA). The breeding program has attracted site inspections by Dr John Knowles, the then Director of Marwell Zoo, the Chief Executives of both WAZA and PAAZAB (Pan African Association of Zoos and Aquaria) and later, by Lynn Stafford, the Deputy Director of Marwell Zoo - all of whom give it the thumbs up. Dana Holeckova and Jeru Vanbera from Dvur Kralova Zoo inspected the project in situ prior their donation of a further 4 female roan antelope in January 2008.

The purpose of this highly costly and tightly managed project is to propagate salted animals for onward distribution to other protected areas where new populations can be established in tick infested environments. Mlilwane North and Mkhaya will be the first recipients of roan from the project, which Dr John Knowles says is the best in situ conservation project Marwell Zoo has ever been involved with.

To all who have so generously supported this project, we express our deep gratitude and look forward to the day when viable populations of Roan antelope are spread on different reserves in Swaziland once more.