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Abstract: The Air Force Base in the north-eastern Transvaal region of South Africa is situated within bushveld terrain where quite a large variety of smaller game can be found wandering onto the landing strips. This has become a serious safety hazard with various incidents recorded over the last couple of years of aeroplanes being involved in collisions – or near collisions – especially with impala, duiker and warthog. During June 1993 relocation of radio-collared cheetahs from the Hoedspruit Cheetah Breeding and Research Centre were relocated to the security area of the nearby Air Force Base in order to hunt down game on the runway. The cheetahs in this ecological experiment are to be instrumental and vital to promote flight safety and keep small game numbers in check.

Cheetahs Help Air Safety

by Britta Weidhase

During June 1993, two female cheetahs from the Hoedspruit Cheetah Breeding and Research Centre were relocated to the security area of a nearby Air Force Base in the north-eastern Transvaal region of South Africa. The base comprises approximately 2,000 hectares and is bordered on the south and the east by runways for the base's military aeroplanes. The cheetahs were to be instrumental and vital in an ecological experiment to promote flight safety and keep small game numbers in check.

Situated within bushveld terrain, quite a large variety of smaller game can be found wandering onto the landing strips and this has become a serious safety hazard with various incidents recorded over the last couple of years of aeroplanes being involved in collisions – or near collisions – especially with impala, duiker and warthog.

As the area is relatively large and overgrown with high grass and dense bush, it was difficult to find an ecologically sound way to remove buck and smaller game from the area without upsetting the balance of the ecosystem.

As a safe compromise, Hoedspruit Air Force Base Nature Conservation Officer, Captain Phillip Oosthuizen, proposed using cheetahs to keep a check on the wildlife roaming the runways. The Base provides an abundance of prey and a natural habitat with open savannah and high grass – two of the most important survival factors for cheetahs.

The idea met with a great deal of enthusiasm and arrangements were made immediately. Shortly before the two cheetahs from the Hoedspruit Cheetah Breeding and Research Centre were released into their new territory, they were both fitted with radio-collars in order for Captain Oosthuizen and his team to monitor their movements. The reason for the monitoring was to provide material for a combined study concerning the effect of the cheetahs in reducing flying safety risks, and their behavioural activities as well as their overall influence on the various game populations.

Initial release was into a smaller, fenced camp on the Base in proximity of the runway, where they were fed and their reactions observed to the noise of the comings and goings of the aeroplanes. It must be mentioned that the Hoedspruit Cheetah Centre, where these two originated from, is located near the Air Force Base and that the sounds of aeroplanes thundering overhead occasionally was not an entirely new sound for these animals.

After spending their first two months in this temporary camp, the cheetahs were released into the remainder of the Base, and, according to Captain Oosthuizen, the results have been tremendous. Not only have the cheetah been observed hunting down game on the runway, but behavioural studies have shed some new light on their habits.

Shortly after release the two females split up and roamed the area individually. Activities were recorded as often as possible, but this was sometimes made almost impossible by the dense vegetation and humid conditions, which affected the transmissions from the cheetah's collars.

The younger female, who tended to be far more aggressive than her partner, adapted soundly to her new environment and started hunting almost immediately. It was however noted that she was primarily interested in catching very small buck. On occasion she was observed in the proximity of impala herds, but her chase never resulted in a successful catch.

The older female, however, seemed to have lost the natural instinct to hunt for survival, and had to be coaxed to hunt on several occasions. It seemed imperative to re-teach her the basic knowledge of hunting and several methods were attempted. On one occasion a badly injured steenbuck was placed within 20 metres of the hungry animal and after a short chase she instinctively downed the buck and started feeding.

This did however not result in her hunting her own prey and upon the recommendation of Professor Dave Meltzer, who holds the Price Forbes chair in wildlife diseases at the University of Pretoria's faculty of Veterinary Science and who has been carrying out research on cheetahs for many years, it was decided to withdraw all assistance with feeding.

A nerving time followed for the observers and after 18 days without food she was discovered with a steenbuck carcass, which she had half-devoured and then half-hidden in a shallow warthog hole. The carcass was partly covered with leaves and branches in order to hide it from other predators.

It was very unfortunate, however, when the older female injured her foot not long after making her first catch and had to be removed from the Base for treatment. Two months later the younger female had to be removed as well because, although she was making superb progress with the hunting, she had begun to hunt larger game which she devoured only partially, which, in turn, lured vultures to the carcass and created a substantially new hazardous situation along the runways.

The experiment had progressed so well by that time and could not just be abandoned and so it was decided to have the two females replaced by two young male cheetahs, also from the Hoedspruit Centre. This proved a resounding success because the two males not only hunt in unison but have also established the runways as the gateway to their meals with 50% of the catches recorded in this location.

It seems that the Hoedspruit Air Force Base, in co-operation with the Hoedspruit Cheetah Breeding and Research Centre have established what they set out to do.