

Leopard genetic tests reveal interesting relationship

by Esmarie Jooste

With the leopard research project on Welgevonden coming to an end, it became clear that the three collared females have very interesting prey preferences and unique behaviour. Leopard predation upon baboons is particularly interesting and the percentage of baboons killed by the three female leopards are some of the highest ever recorded in any region. The Airstrip-female (living in the vicinity of Fig Tree plains) and the Taaibos-female (living in the Sterkstroom Valley towards Eastgate) have particularly high percentages of baboon kills. Owing to the fact that the Taaibos-female was captured right next to the Airstrip-female's home range and was about the size and age of the Airstrip-female's grown-up cub, it was speculated that the Taaibos-female might be the Airstrip-female's daughter, and that this baboon-killing ability might have been passed on from mother to daughter.

Consequently, biological samples from all six of the captured leopards on Welgevonden over the past year were genetically analysed to determine relatedness among the leopards. Much to the surprise of all the researchers, none of the leopards are related, except for the Airstrip-female and the Izingwe-female which are cousins. They possibly had the same grandmother or grandfather. According to Dr. Cindy Harper from the Onderstepoort Veterinary Genetics laboratory, even in a small population like this the allele frequency data was very good and appear to be quite diverse.

Even though there is now no ground to speculate that baboon-killing skills can be passed on from mother to cubs, the genetic results possibly reveal that the three female leopards each individually acquired the specialised skill to kill baboons, and that by itself is maybe even more extraordinary.

Notes and acknowledgements

Esmarie Jooste is a MSc student at the centre for Wildlife Management at the University of Pretoria. Leopards were captured under ethical clearance no A022—06 and all its amendments.

This study is part of a larger study by Lourens Swanepoel on Leopard ecology at Welgevonden and the Waterberg Biosphere.

Leopard research at Welgevonden was funded by the Wilson foundation (Trisha Wilson) and genetic analysis funded by the Centre for Wildlife Management.