

Durant SM. 1998. Cheetahs of the Serengeti. Lifewatch:7-8.

Keywords: 1TZ/Acinonyx jubatus/behaviour/cheetah/conservation/diet/hunting skills/Serengeti/ social behaviour/status

Abstract: Summary of the social and behavioural habits of the Serengeti cheetah, as well as of their hunting skills and diet

CHEETAHS OF THE SERENGETI

Although cheetahs used to be widespread across much of Africa and Asia, they are now almost extinct within Asia and confined almost entirely to eastern and southern Africa. Today there are probably only 10,000 cheetahs left worldwide, and they continue to decline because of loss of habitat and persecution. They are increasingly found only in protected areas where they occur at extremely low densities. Even in protected areas, their survival is threatened because their main competitors, hyenas and lions, are thriving. Over the last seven years I have been running the only on-going, long-term study of wild cheetahs, in the world. This project began following individually recognisable cheetahs 23 years ago and has told us much of what we know today about wild cheetahs. However, even after so many years of study, cheetahs continue to fascinate, as their behaviour is very unusual. Females of all other cat species hold small territories, sufficient to maintain themselves and their immediate offspring, whilst males hold territories larger than, and overlapping with, those of the females.

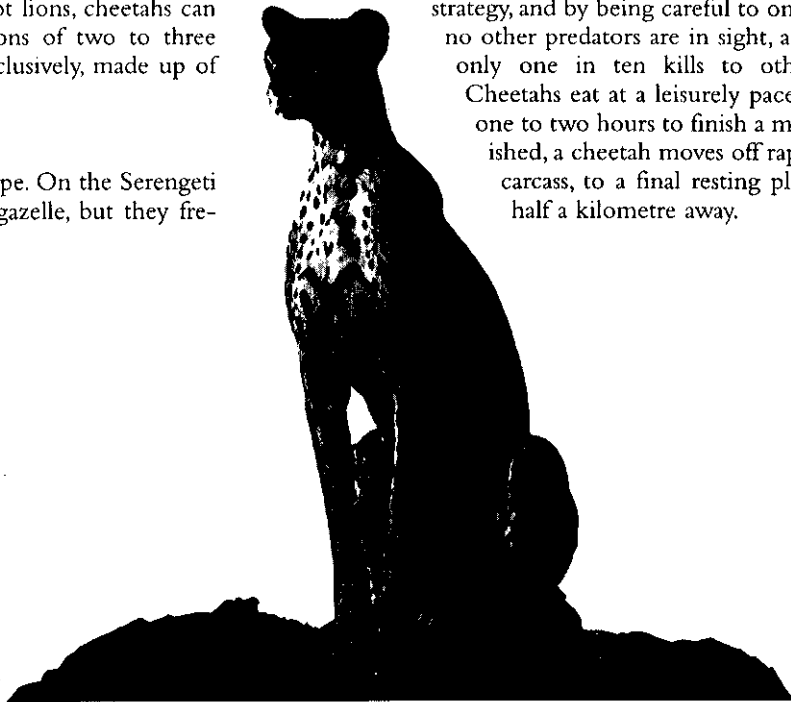
However, female cheetahs have large, overlapping home ranges enabling them to follow migratory prey, moving across 800km² per year. Males hold small territories within these ranges, averaging only 50km², less than one-tenth of the range of the females. Unlike all other cats, except lions, cheetahs can be social. Males form permanent coalitions of two to three males, which are usually, although not exclusively, made up of brothers.

Hunting

Cheetahs predominantly hunt small antelope. On the Serengeti plains, their main prey is the Thomson's gazelle, but they fre-

quently take the larger Grant's gazelle, as well as wildebeest and zebra. In woodland areas, cheetahs take a greater variety of prey, particularly preying upon impala and reedbuck, species which are more common in these areas. Smaller prey, such as hares, are important to cheetahs in both woodlands and plains. Cheetahs hunt by a long stalk followed by a short, fast chase, when they make use of their famed speed. A successful chase lasts only 20 seconds, and is brought to an end by a slap on the rump of their quarry with one of their front paws. The prey tumbles and the cheetah falls on it and kills by asphyxiation, through a throat bite. Asphyxiation is rapid due to oxygen deprivation at the end of a fast chase. Cheetah hunting success is high. On average, a cheetah has a 47% chance of catching prey once it starts stalking. This figure rises to up to 90% when they are hunting hares and fawns, which are easy to catch, and drops to around 20% when hunting adult gazelle.

Once prey is caught, then a cheetah is careful to hide it against the sharp eyes of soaring vultures. If spotted, these scavengers will land, and can attract lions and hyenas to the cheetah's precious meal, which can threaten both adults and their cubs. A cheetah will often drag the carcass to the shade of a tree, where it is hidden from above, to avoid detection. Using this strategy, and by being careful to only hunt when no other predators are in sight, a cheetah loses only one in ten kills to other predators. Cheetahs eat at a leisurely pace, often taking one to two hours to finish a meal. Once finished, a cheetah moves off rapidly from the carcass, to a final resting place at around half a kilometre away. >



Reproduction

Cheetahs produce their first cubs at two years of age after a gestation of three months. The usual litter size is between three and four cubs, but as many as seven cubs have been recorded. Over the first two months of their lives, the young cheetah cubs are immobile, and remain in a grassy lair, whilst their mother leaves at dawn every day to hunt, returning at dusk. During this period, the cubs are defenceless and vulnerable and so the mortality rate is high. Nearly two thirds of cubs die before they are able to leave the lair. Most cubs are killed by lions. A cheetah mother can do little to defend her cubs against these much larger and more aggressive predators. Even after cheetah cubs leave the lair, mortality continues to be high, reaching nearly 50% in the first month out of the lair, and 40% in the second. Again, the main cause of death is predation by lions and hyenas, although direct observations of mortality are rare. Overall, out of twenty cubs born, only one will be fortunate enough to make it to independence at eighteen months.

Those cheetah cubs lucky enough to survive start to learn to hunt at around six months. After this age, the mother will bring them young fawns and hares on which to practise their hunting techniques. However, hunting requires great skill and co-ordination and so, when the cubs leave their mother at eighteen months, they are still not proficient hunters. At this time, they depend on young prey, which are easier to catch, and therefore they generally leave their mother in the wet season, during the birth peak of the gazelles. Cubs leave together in a sibling group in which they remain for an average of six months. Brothers

remain together for life, but rarely live long, due to intense competition with other males for territories. In general, a cheetah male can only expect to live to four years, whereas a female will live around seven years. The oldest recorded male and female in the Serengeti were eight and fourteen years respectively.

The top predator

The losses of kills and cubs to predation, may be the key to the unusual social system of cheetahs. If a cheetah is to avoid these losses, her best strategy is to avoid large predators whenever she sees them, and this is precisely what cheetahs do. In a sense, cheetahs form a final layer in an ecological hierarchy. This hierarchy starts with the grasslands through to the herbivores and then the largest predators, until we come to cheetahs, which fit into the gaps in the system where they can find prey, yet avoid other, more aggressive, large carnivores. In a way, cheetahs are the top predators in the ecosystem and depend on large areas where they are free to roam away from other predators.

Sadly, as land is lost to cultivation and predators concentrate in protected areas, these areas will become increasingly crucial for the future survival of these beautiful and vulnerable cats.

SARAH DURANT
INSTITUTE OF ZOOLOGY

