

CONSERVATION

BROTHERHOOD *of* STRANGERS

Cheetah males create alliances, pooling their mental and physical abilities to face the challenges of life in the Mara, says **Elena Chelysheva**

PHOTOS BY ELENA CHELYSHEVA





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BELOW: Five male coalition standing: Cheetahs use elevated objects for scanning for food and danger. Cheetahs have between 2,000 and 3,000 spots, which help them to camouflage themselves.

Despite the fact that cheetahs have been studied intensively since the late 1960s, we continue to discover mysteries about these unique animals. Before the 1980s, cheetahs were thought to be solitary animals. In 1986 T. Caro and D. Collins described cheetah male coalitions and how are they are formed.

After the mother leaves her cubs, siblings stay together for several months. Once they reach sexual maturity, females and males separate. Male siblings form lifelong unions called *coalitions*. In some cases, an unrelated male can be accepted by brothers. Life in a group provides a number of benefits -- males can hold "better" territory, with more access to favourable habitat and prey. They are able to take down larger prey and care for each other, sharing vigilance and defence.

For example, when one of two so-called Sopa Males, which we observed in Kenya's Maasai Mara, had an irritation on the skin, his partner patiently licked the area, and within a month, the skin completely recovered. When the same male

was limping, the other one hunted and shared meals.

Cheetah studies in Tanzania's Serengeti show that single males can be successful if the number of coalitions in the area is limited, but a higher number of coalitions decreases the success of singles. Forming groups can be a survival strategy when the population of the species in an area is growing. Cheetah density in the Mara increased slightly from 1.6 cheetah/100km² in 2015 to 1.9 in 2016, and that could lead to some unrelated males forming unions. Since 2016, apart from the coalitions of the brothers, we have observed three unusual males groups.

The first one was formed by two 17-month-old sons of Imani and the 16-month-old son of Nora, who united soon after they had split from their mothers. It is clear the brothers knew the benefits of joint life. However, the lone male had lost his littermates by the age of five months and did not have the experience of brotherhood. The union did not last long. After a few months, the brothers were spotted without the unrelated member, who probably died, as he was not seen again.



HOW CHEETAHS HAVE DECLINED WORLDWIDE

Today there are just 7,100 cheetahs left in the wild, according to the new study. That's down from an estimates 14,000 cheetahs in 1975, when researchers made the last comprehensive count of the animals across the African continent.

In addition, the cheetah has been driven out of 91 percent of it's historic range—the big cats once roamed nearly all of Africa and much of Asia. Today, the majority of cheetahs - 4,000 adults and adolescents are in 6 South-African countries: Angola, Namibia, Zimbabwe, Botswana, South Africa and Mozambique. The species is already almost extinct in Asia, with fewer than 50 individuals remaining. The next largest population -1,400 individuals, is in Eastern Africa - in Tanzania and Kenya.

In a second case, a 17-month-old son of Miale (a female cheetah we have been monitoring for 7 years) formed a coalition right after his mother left him, with a male, who had just lost his brother. Miale's son had lost his littermates at the age of 3 months. In the newly formed coalition, both boys displayed such a high level of affiliative behaviour with joint hunts, rests in close physical contact and mutual grooming that one might think they were brothers of strangely different size, face shape and colour intensity.

LARGEST MALE CHEETAH COALITION

The third union was the most unique, as it consisted of unrelated males. A group of five males came into the Mara Reserve from the adjacent Naboisho Conservancy at the end of 2016. The most interesting thing is that one of the smallest males had a sister before joining males. Both siblings were very successful hunters, jointly bringing down adult Impala males. By November 2016, the male had split with his sister and started an independent life. In December 2016, he united with the other four males, becoming a member of the largest cheetah male coalition ever observed in the Mara. Although he was small



when he joined other males, within a few months he grew bigger and became a decision-maker and the leader of the group named Fast Five.

If a cheetah coalition consists of brothers (littermates), members have equal position in the group and share duties. In Fast Five there was a clear hierarchy with leadership shared by two unrelated males. Initially, the leader was the only one who was making decisions on when and which direction to move, and when to initiate a chase. He was also the most successful hunter in the group.

By July 2017, another big male became a co-leader, and since then both males take turns in deciding when and which direction to move, where to cross rivers and how to catch a prey. The co-leader also plays a role of peacemaker, often protecting the males attacked by the leader. Two subordinate males follow the leaders wherever they go, and participate in hunts, assisting in taking down large prey.

The most submissive male, Dark-tail, was often the one on whom the leader was taking out

TOP & BELOW: Cheetahs are classified as vulnerable by the IUCN Red List of Threatened Species. Cheetahs are Africa's most endangered big cat. Biggest threats to their survival are loss of habitat, and competition for resources.



his reverse aggression (e.g. when the group was disturbed by tourists). Often the fight involved all males. Usually, a co-leader protected Dark-tail and fought back for him. It is encouraging to watch Dark-tail raising his confidence under co-leader's protection.

All members of Fast Five seek an equal position with other members to maintain balance. They spend significant time resting in close contact with other members of the coalition, changing places to be near different individuals. Males might rest apart from each other in daylight, but at night, they all sleep in a tight tangle. They all participate in mutual grooming after mid-day rest and meals.

Big groups require more food and the contribution of each member in the hunt.

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WHEN MID-SIZE ANTELOPES ARE ON THE MENU, THEY SPLIT TO MAKE TWO KILLS AT A TIME AND SHARE THE MEALS.

When large prey is available, Fast Five apply a united group hunting technique. When mid-size antelopes are on the menu, they split to make two kills at a time and share the meals. One evening, males spotted a Thomson's gazelle inside a thick bush and launched a chase. Co-leader caught the gazelle and started eating.

In the meantime, the others had lost sight of him in dense bush. After consuming half the kill, co-leader started calling his coalition mates, but due to the movement of more than 10 tourist vehicles, the males could not hear each other. This led to confusion and the co-leader began running around in the bushes. After some time, males did what humans when we lose someone in a new or crowded place -- they all returned to the spot where the hunt began. When all the tour

TOP: Four males feeding on adult Topi. Usually the one in a group who suffocated the kill, will be the last to participate in the feast resting nearby.

Cheetahs are carnivores, so rely on meat for survival. The size of prey depends on the environment and prey availability, number of hunting animals, their age, health status and personal experience. The diet is made up primarily of small to medium size antelopes. A group of cheetahs take down larger prey.

vehicles left, co-leader led the group to the kill, and the males ate in peace.

Sometimes, males in a coalition compete for a female in estrus, and the one that dominates gets the opportunity to mate. By mating with multiple males, females gain the benefit of confusing paternity and thus avoid infanticide and/or increase the genetic diversity of their litters. A study in the Serengeti National Park revealed that multiple paternities occurred in 43 per cent of the litters. Competition between males reduces chances of any one of them spreading their genes alone. Some coalitions in the Mara avoid competition for females. One member of the Oololo Brothers disappeared with a female for three days. The next time, the other male mated with different female. Sopa Males took turns with the same female, while the other coalition member rested and hunted four kilometres away.

The Fast Five use the split mating method. To date, they have encountered six different females -- as best as we know. Three different males mated with three different receptive females, being alone or with one or two other members. In two cases, Black-tail was following the mating leader or co-leader.

It is difficult to witness mating as cheetahs are shy. They however exhibit courtship behavior during daytime, but the actual mating takes place at night. To date, there have been only four cases of mating documented by photos and video in the Mara during daytime. As all happened within the past five months, it could be a result of increased cheetah numbers and numbers of coalitions, motivating males take every opportunity to mate.

In a big coalition, the chance to escape with a female or peacefully share the female is low. On 19 December 2017, when four members of the Fast Five came across female Nora in estrus, one male used his single chance. While the three members went hunting and the female started moving away, co-leader followed her. Once he approached Nora, she took a characteristic pose for mating, crouching and moving her tail aside. He immediately mounted her, but when copulation was in process, the three other males noticed the action and rushed to the mating couple to participate.

Fortunately, crowding over a female did not affect mating, and after copulation was over, Nora started intensively rolling, which was an indicator of successful mating. Unfortunately, soon after that, a lioness appeared in the field, attracted by loud cheetah vocalizations. The dispersed males lost visual contact with Nora and were searching for her until darkness, loudly calling -- yelping

BELOW: Co-leader of the Fast Five is mating with Nora and 3 other members are participating by getting under the mating male and on top of him. Male cheetahs do not remain with the females after mating, and do not play any role in rearing young. Female cheetahs on the other hand are caring, affectionate and dedicated mothers.

and chirruping. The next day, we found Nora one kilometre away from the Fast Five. It is yet not clear if Fast Five are related, but the behaviour of one male in a group during temporary separation of a co-leader, could indicate close relationship between some of the males.

Early in the morning of 16th October 2017, we found only four males sleeping in a bush. After waking up before the sunset, one of them started making loud yelping. These sounds spread over two kilometres and are meant for communication over long distances.

The calling male then led the group to the area where most probably the co-leader had been lost. All four were limping on front limbs, which could be a result of fighting the previous night. Such strong concern of only one member of the group can indicate his close relationship with the missing brother. The next day, he was the one who found the missing male, and all group re-united. The reason for separation could be following a female and limping as a result of fighting while trying to get an access to her. Future genetic analysis will help to bring to light possible kinship between the group members. ●

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