

# taming *testosterone*

KATE EVANS (2)

It's easy for the girls – young female elephants stay in the breeding herd, but the boys have to venture into a new world, and establish their place in bull society too. **Kate Evans**, of the Elephants For Africa Trust, is researching adolescent male elephants in the Okavango Delta and has discovered that guidance for the young bulls comes from an unexpected quarter.

**A**s a wave of sand comes flying towards me, I close my eyes quickly. When I open them, I'm momentarily disorientated – why is the scene before me grey and wrinkly? It's an elephant, and a little too close for comfort.

Napoleon and Jumbe, two young male African elephants I'm studying, are sparring again, but this time their spat has escalated into something more serious. Although Jumbe is beginning to tackle the big boys now, I don't rate his chances with Napoleon, who is a few years older. Engrossed in taking notes, I fail to see them edging closer to the vehicle and when I look up it's too late to move. Napoleon charges a tree, rips it from the ground, shakes it and throws it, covering me in sand. It's an impressive sight,

**The imperative to establish a rank among their peers blurs the distinction between frolicking and fighting for bull elephants.**

but Jumbe isn't impressed and tusks Napoleon in the rear – the fight is on. They charge off through the forest and disappear onto the floodplain.

For a male elephant, the aim in life is to be big and strong so that he will appeal to the females and sire as many offspring as possible. Calves begin sparring at an early age and continue to compete with other males for much of their lives. Unlike females, which remain with their natal herd, males leave the herd as adolescents (between 10 and 20 years old) and join up with other bulls. They must build up bulk before they can compete with the big bulls for mates and can start coming into musth, the period of heightened sexual activity characterised by increased aggression, musty secretions from the temporal glands, urine dribbling and green penis syndrome. Being in musth is an expensive business, so to ensure that he stays in it for longer – and is thus able to mate with more females and father more calves – the male must be in peak physical condition.

For the past seven years, I have been studying male elephants in the Okavango Delta, trying to decipher what goes on during their adolescence. Are they really kicked out of the natal herd by the females, as is commonly believed, or do they leave of their own accord? How do they integrate into bull society? There appears to be no definite rule; each elephant acts as an individual. Some stay with the herd for as long as possible, going off on jaunts into bull society but returning when they have had enough; in some instances, achieving independence can take as long as four years. Others just leave the herd one day and do not return. Observations suggest that the rank of a youngster's mother within the herd may play a role in how quickly he becomes independent.

It was previously accepted that when a male leaves his natal herd he is fully equipped for life as a bull elephant. Now we know that the transition to adulthood is far more complex and that males

need to learn from older elephants. In the Pilanesberg National Park in South Africa, orphaned male elephants were moved into areas where there were no older bulls present. After they had come into musth prematurely and attacked and killed rhinos in the park, older males were introduced. Their arrival suppressed musth in the youngsters and the unusual behaviour stopped.

**B**ulls too old for breeding are often regarded as surplus to requirements, but my research has shown that young males choose to be closest to bulls in the oldest age class. This makes the most mature animals a crucial element in male elephant society. But it is far more than just a social issue – it is one of survival. When a young male quits the herd, he physically leaves the area he knows and must learn where to find food and water resources in his new environment. The safest and most energy-efficient way to do this is to follow someone who knows. It has long been accepted that matriarchs are the repositories of social and ecological knowledge in female elephant society; we are now realising that in males it is the mature bulls that have this specific knowledge. In conservation terms it is important that

we acknowledge this information when managing elephant populations: how do we deal with the intricacies of male society when it comes to issues such as trophy hunting, translocation, crop-raiding and culling?

As for Napoleon and Jumbe, it's important for them to learn each other's strengths and weaknesses and to figure out where they are in the hierarchy, so that when they are fully mature they will know who to avoid and who they can take on without risking injury and possible death. It has to be a calculated decision, for fighting is a costly undertaking and they don't want to pay the ultimate price.

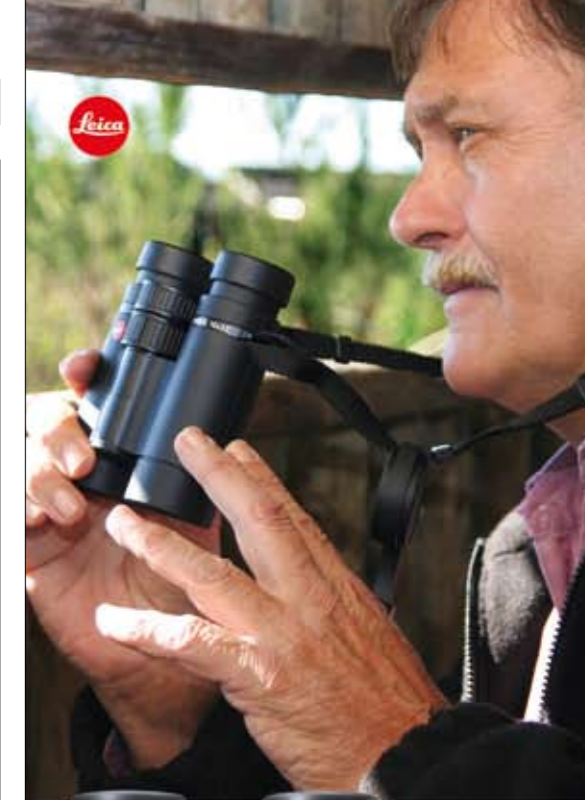
By the time I've driven around the forest and can see the floodplain, the tension between the two young bulls has eased and they are frolicking in the water rather than fighting. Over the coming years, they will settle into their rankings and, although one of them will become dominant, they will no doubt still socialise. I hope to follow their story to the end and uncover more of the mysteries of male elephant society. ■

**Even gentle sparring helps young bull elephants to gauge the relative strength of an opponent.**



**T**he Elephants For Africa Trust (EFAT) is a non-profit charity that researches the ecology, demographics and habitat utilisation of elephants in the Okavango Delta. It works closely with the Botswana Department of Wildlife and National Parks and the Ministry of Environment, Wildlife and Tourism to help guide conservation and management decisions. It is also closely involved in environmental education in the country, with a training programme for Botswana nationals to learn field research skills, and a scholarship fund that will enable students to complete post-graduate degrees through the University of Botswana and Bristol University, UK.

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