

ELEPHANTS

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In both African and Asian elephants females and young ones live together as a herd or group. Males, as they mature, tend to drift away from the group and as adults live largely alone. It used to be believed that the older females in a group chase away the males when they come into adulthood. This, however, is not true: males leave the herd of their own accord. Even as adults, males continue to interact with the herd that they were born into – their natal herd. They do not, however, 'hang out' with a female group all the time.

The basic element of an elephant herd is the mother-calf unit, which is a female with the baby she is nursing, which is hence dependent on her. A female will nurse a baby for about two years, after which it starts to be more independent of the mother. As the male babies grow up they leave at around 10-15 years of age, but the female babies grow up into juveniles and adults staying with their mother. This then forms the first level of social organization in elephants; the 'family group', which consists of a female, and her female offspring of all ages and younger male offspring. At about 8-10 years of age the females come into their first estrus period or breeding condition. Elephants have a gestation period of 22 months. So a young female will give birth to her first baby at about 10-12 years of age. She will have the same relationship with her babies as her mother did. Thus, after many years, the family group may expand to include three to four generations of elephants. The females reproduce till they are 35-40 years of age, being considered 'post reproductive' thereafter. Elephants in the wild probably live up to about 50 years of age, although they can live up to about 70 years in captivity.

It is not clear why female elephants and young live in herds. In some places there may be an advantage to group-living, such as protection from large predators that could take a baby, such as lions in Africa or tigers in India. There may also be some advantages in babies and juveniles benefitting from shared caring by the adult females ('aunts') in the group. However, group living also has its disadvantages. Living together in a herd, you have to share food with everyone. So the entire group has to wander around till enough food for the whole group is found.

Therefore habitat conditions probably have a major influence on group size. In dry scrubby habitats such as Yala, food is not that plentiful unlike in luxurious grasslands. Therefore the group size may be smaller than in other places with abundant resources.

A female may give birth to a baby every 4-5 years, and with the female babies growing up into adults and also reproducing, soon the 'family group' grows in size. Either when the oldest female who is the grandmother or great grandmother of them all dies, or because the family group becomes too big given the habitat conditions, it will split into a number of new 'family groups' with an adult female as its focus. When that happens, the related family groups are thought to continue to spend more time with each other than with unrelated groups, leading to a second level of social association called a 'kinship group' or a 'bond group'. Similarly with many decades of this process each family group in a kinship group will split and evolve into a kinship group of its own. The entire collection of kinship groups is then termed a 'clan'. The kinship groups within a clan will continue to associate with other related kinship groups but of course to a lesser extent than between the family groups that form each kinship group. Female groups in African elephants are thought to have a social organization with about 3-4 levels of relatedness based such associations.

In Sri Lanka and especially in Yala, however, we do not see such a complex and hierarchical social organization amongst females. The basic mother-calf unit is, of course, clearly there. However, the 'family group' (the first level of social organization) appears to be much more fluid and less tightly knit. Some female offspring also become independent as they become adult. Most females and mother-calf units associate in small groups with the members of such groups changing regularly. Whether higher levels of social organization such as 'kinship groups' and 'clans' exist is still not clear. Often a female calf unit will be accompanied by a young female. This is what probably gave rise to the myth of the '*Thun path rala*' or the 'group of three' in Sri Lankan folklore, supposed to consist of a mother, father and a baby elephant. Nowadays, with the realization that adult

males do not remain with the herd, the term is more often applied to a group of two females and a baby, such as featured on page 42.

In African elephants, the oldest female in a group, who is the progenitor of all the group members, is also thought to play an important role in leading the group. She is termed the 'matriarch' and is thought to decide what the group does and where it goes. In Sri Lanka, even when there is a 'matriarch' present in a given group, she does not seem to play a prominent leadership role. In instances of perceived threat it is often a younger female that seems to take the initiative to confront an aggressor. Where the group moves from one area to another, often the oldest member of the group follows (rather than leads) the others.

Therefore, while elephants in Sri Lanka also have a complex social organization built around females, it maybe looser and less hierarchical than that of African savannah elephants. While African savannah elephants have been studied for many decades, the social lives of Asian elephants remain largely unknown. This is partly because of the difficulties of studying Asian elephants which, after all, live in forest habitats with poor visibility. Another factor that complicates the study of Asian elephants is the ubiquity of human-elephant conflict in Asia. As a result, Asian elephants have behaviorally adapted to avoid humans by becoming largely nocturnal, withdrawing into cover the moment they realize there are people around. Yala is one of the few places in which Asian elephants may be observed at close quarters throughout the year. This is because some of the female herds in Yala are habituated to people, providing us with an unparalleled window to the intimate moments of their lives.

Elephants of Yala

If you ask an 'old timer' he will likely tell you that you see fewer elephants in Yala now than in the past. Currently there are about 200 elephants that use Yala Block I. Of this, around 150 are females and young that live in herds. One of the female groups is habituated to people while another

is partly habituated. Most sightings of elephant groups in Yala are of these two herds. It is hard to catch even a glimpse of the other groups as they mostly keep out of the way of people.

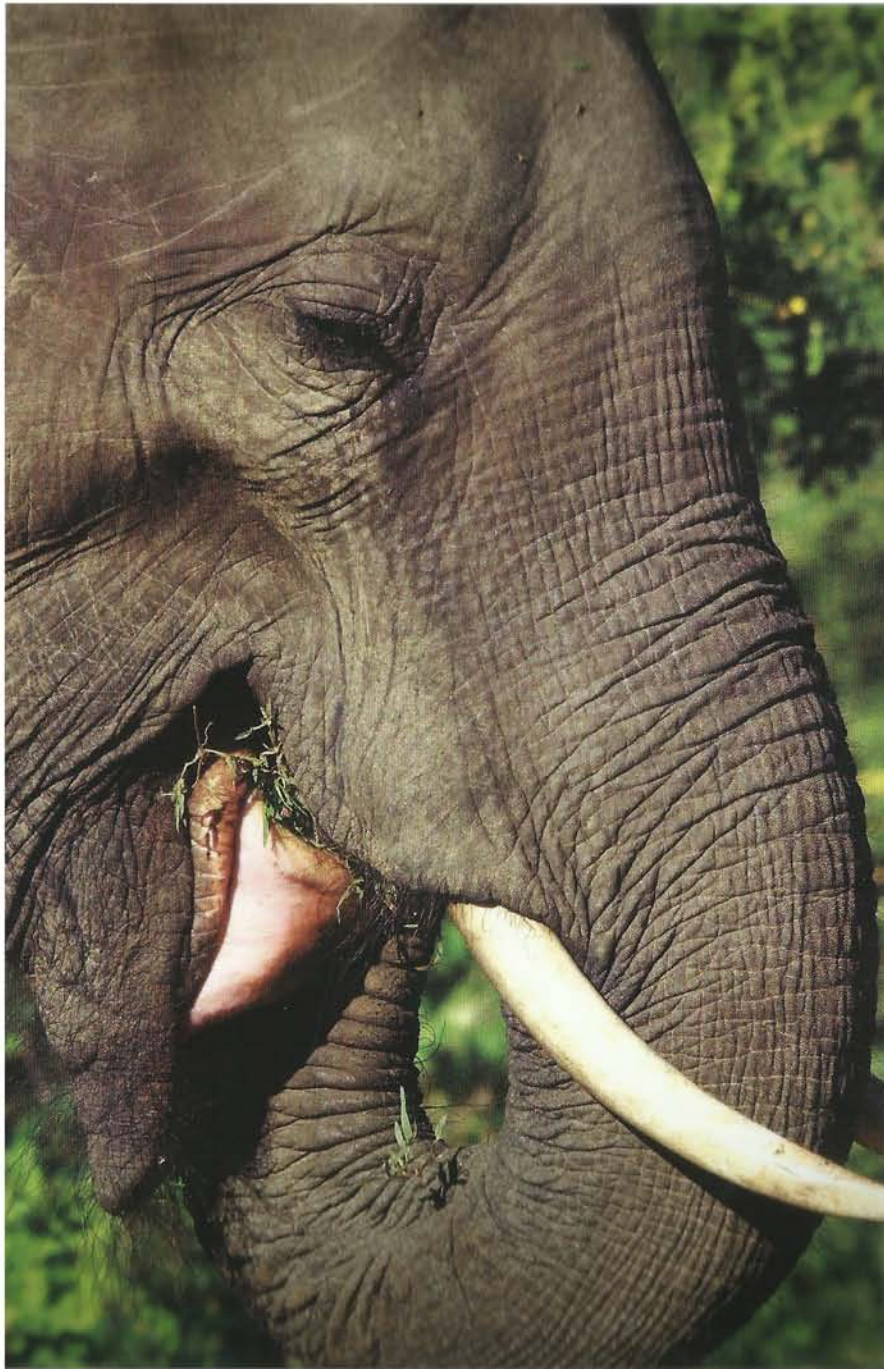
The Tusker, Gemunu, and his herd

The most habituated herd we call 'Gemunu group' because this is the natal herd of the tusker Gemunu, one of the better-known males in Yala. His mother, Devi, disappeared in 1995, and he is now in his early twenties. The Gemunu group is composed of about 30 individuals. Members of the Gemunu group, include Vidura, a young tusker, and his mother Ramani. On page 42 we see Dushya and Sashi, two adult females also from the Gemunu group, walking along the Yala main road with Dushya's baby, Dusty, in the middle. Sashi does not have any babies yet and is on 'aunt duty'. The home range of the Gemunu group was always entirely within the Park and they are comfortable around people as seen in the interaction between Gemunu and a group of visitors on page 34.

Descendants of Biso – The Old Matriarch

The partly-habituated group is the 'Biso group', which has about 20 members. Biso was an older female in that group, and one of her daughters, whom we call Biso-Menike, was fitted with a radio-collar. Biso may not be around anymore; she was last seen in 2009. The two babies playing with an older juvenile on page 31 are from the Biso group. The baby on the left of the picture is 'Bella', a female born in June 2010 to Big Bertha, one of the older remaining elephants in the Biso group. The other baby is 'Boniya', whose mother is 'Bonnie'. He was born in April 2010. On page 35, Vidura from the Gemunu herd, is seen with Bessie and her baby, Ben Hur, who are from the Biso group. On page 44, Vidura is featured again with more members of the Biso group. Both the Gemunu group and the Biso group are commonly seen in the central part of Block I and on the main road. The home-range of the Gemunu group extends to Block II, while that of the Biso group reaches more towards Palatupana.

As with Vidura, male elephants drift away from the natal herd and may team up with other juveniles or adult males and form loose associations



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with them. In Yala, such male groups are rare and it is mostly single males that are observed. In predominantly grassland habitats such as Uda walawe, Minneriya and Kaudulla, where food is plentiful, it is common to see such male groups, which may number up to about ten individuals. However associations between the members of such groups are transient, unlike in female groups. The reason males do not stay permanently with female herds is the cost they would incur in terms of finding food.

The Human - Elephant conflict

The most important resource for an adult male is females in mating condition. Since a female comes into such condition only once in 4-5 years, it is not advantageous for a male to remain with a single female herd. Instead, when a female is in estrus, she advertises her condition through hormones in her urine, and males from the surrounding area are attracted to her. There then arises a male-male competition to mate with the female in estrus. The one who wins out in this competition is thought to be the largest and strongest male. Therefore, males take great risks to get at better food resources that will make them bigger and stronger.

Unfortunately the best possible food resource a male can dream of finding is cultivated crops. Food crops have been selectively bred by people for thousands of years to increase their nutritional value, energy content and palatability. Consequently crops represent a food resource that is magnitudes better than anything that an elephant can find in the forest. Elephants raid practically all food crops grown by people: hence the human-elephant conflict. Some of the males you see in Yala wander around in areas outside the Park, as the Park is only part of their home range. Some of them live almost entirely outside the Park and come into the Park only when they are in musth. Musth is a change in physiological condition, with increased male sex-hormone levels; adult males come into musth for a period of one to two months annually. It is recognized by discharge from the temporal glands, which 'wets' the cheeks (featured in the first image on page 33), giving rise to the reference to musth as

'*kammul themila*' in the vernacular. Males in musth also dribble urine continuously and wander over extensive areas. The temporal gland discharge and the urine dribbling give rise to a very pungent and strong odor characteristic of musth elephants. The purpose of musth is not clear, but may be related to reproduction and dominance among males. Elephants in 'musth' are traditionally thought to be very dangerous, which is why musth is also termed '*mada kipila*' or 'musth rage'. Wild musth males tend to be more aggressive towards other males. However, it does not follow that they are also aggressive towards people. The idea that they are, probably originates from the practice of chaining all four legs and immobilizing captive males when they come into musth. Which probably results in them becoming much more aggressive and irritable as what they are naturally driven to do in musth is to wander extensively. You will also see some males with lumpy scars (often in clusters) on their bodies. These are a result of gunshot injuries suffered while raiding crops. Some males have home ranges entirely inside the park and they do not have such injuries.

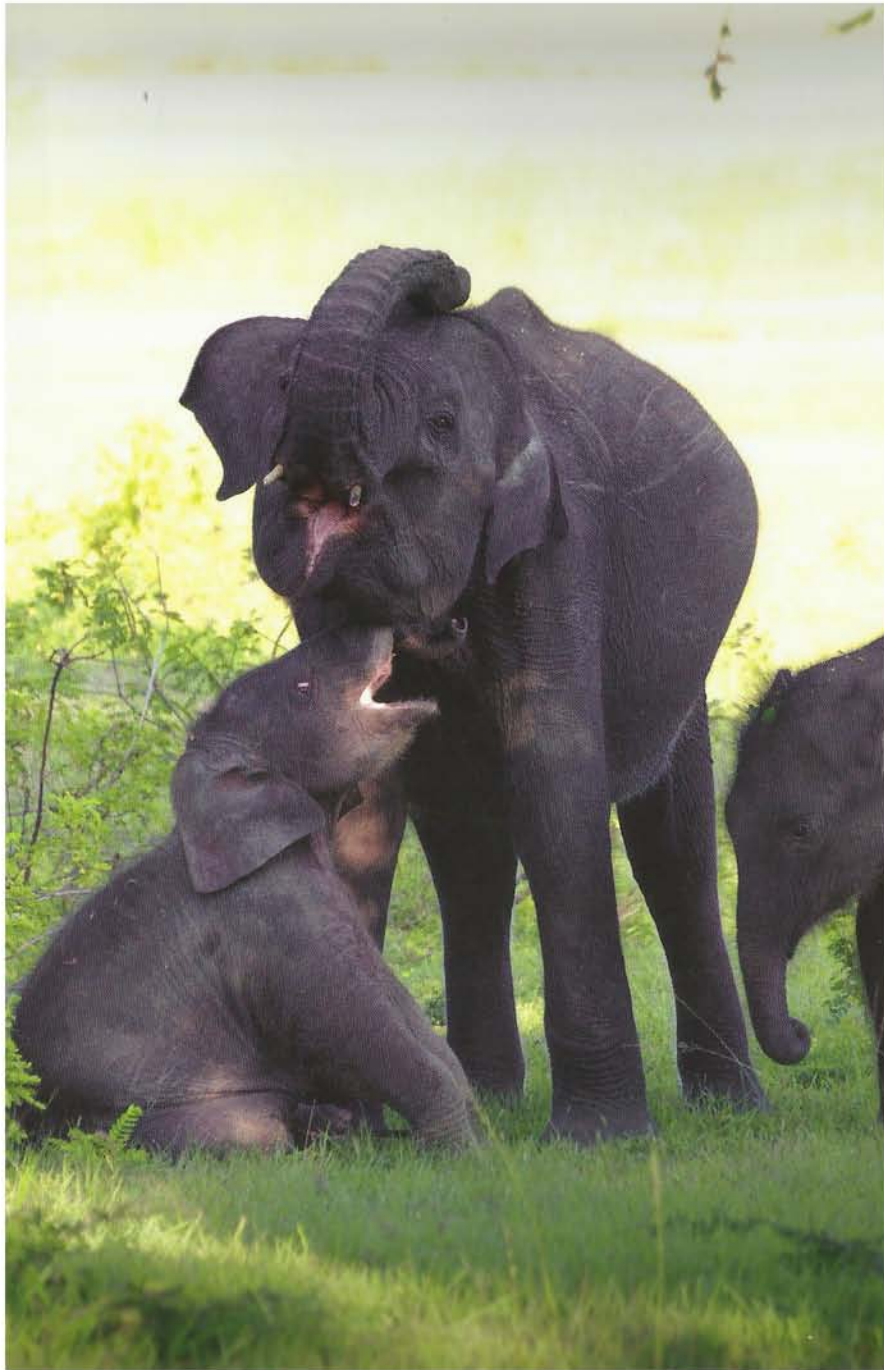
The Plight of Yala's Elephants

While the female herds in Yala are no longer in conflict with humans, they have not escaped unscathed. In fact, the human-elephant conflict has left them deeply scarred. In the past, many of the elephant herds in Yala spent the dry season in the area extending north from Nimalawa Sanctuary, through Divulpotana and Thambarawa to Wedihiti Kanda in the north. This area, adjacent to Block I and the Katagamuwa and Kataragama Sanctuaries, is about 50 square kilometres in extent and is administered by the Forest Department. Around 1,500 families practice 'chena' (shifting slash-and-burn) cultivation in this strip of land. They live in the surrounding villages and come into the area to cultivate vegetables during the rainy season in October-March. At this time most of the herds used to reside within the Park. When the people finished cultivation and went back to their villages, many of the herds used to return to this area. It was a common site to see herds of 80-100 elephants at

many of the tanks in this area during the dry season. They used to feast on the vegetation left over after the people harvested the chenas, but more importantly the plants that grew profusely in the now abandoned chenas during the dry season. When the rains came round the next year, the people would return and the elephants withdrew into the Park. This somewhat uneasy accommodation of people and elephants moving back and forth was greatly beneficial to the elephant herds in Yala and allowed for a high density of elephants in Yala Block I.

This arrangement came to a sudden halt in 2000-2001 with the Department of Wildlife Conservation constructing an electric fence between the Yala Park and the adjacent area administered by the Forest Department, and driving the elephants into the Park due to pressure from farmers. However, soon after, a young male was found dead in a dry waterway that crossed the fence close to Bembawa, with one of its tusks entangled in the electric fence. As a result the wires dangling down to the ground on the waterway were removed while the fence itself was left intact. This gave the herds a reprieve and allowed them to resume their traditional accommodation with the chena cultivators by using the waterway as a highway between the Park and the chena areas. Then, in 2004, two farmers were killed by elephants in the chena area. On the eve of the funeral of the second victim, a group of people assembled and attacked the Wildlife Department's office at Bembawa, assaulting the officers there. They then marched to the main office at Palatupana to attack it. In the melee that ensued, one of the villagers was shot dead by the Department's staff. To appease the enmity that arose between the Department and the villagers as a result, it was decided to drive the elephants into the Park once again and close the fence. Electrified wires were strung across the waterway once more, firmly shutting what had become a thoroughfare for elephants.

The consequences of incarcerating the elephants in the Park by the electric fence were profound. The Park is mostly mature forest in which there is little food for elephants, especially in the dry season. Without access to the bountiful food source they had been accessing for



generations, elephants began to starve and, especially in the dry season of 2005, were reduced to skin and bones. Some of the females and many young animals in most of the herds died of starvation. Since then, in almost every dry season young elephants have died in the Park. The herds were decimated. Even the Gemunu group, whose home range had been entirely inside the Park, did not escape the carnage. The pressure exerted on limited food resources inside the park during the dry season by the large number of elephants that had been shut in, told on the Gemunu group and a number of young in the group too, died. After more than seven years, the herds still have not recovered, and may never do so. Elephants are, after all, the largest herbivores on Earth. Each adult consumes around 300 kg of vegetation daily. When drought annually causes a depletion of resources within the Park, unless they are allowed to move out in search of food and water, they starve: A sad consequence of 'conservation'.

The impact was greatest on the non-resident herds that used to roam outside of the Park in the dry season. Even today, many years after the fence were constructed, every dry season the remaining females of some of the herds come to the Bembawa waterway and gaze longingly at the bountiful food supply on the other side of the fence while their babies starve to death on this (Park) side of it. The irony is that the fence was intended to stop elephants raiding crops, but the ones who suffered most from the fence, the herds, hardly ever raided crops. Lone adult males, who are the ones mostly responsible for raids, remain outside the fence in the Forest Department areas and the Nimalawa Sanctuary, which is administered by the DWC but is nevertheless outside the fence. Other males simply knock the fence down and walk through during the night, raid cultivations and villages, and knock it down again to enter the Park early morning. Consequently human-elephant conflict is still rife outside the Park, while inside the Park the herds resignedly continue to starve during the dry season. That is why you do not see that many elephants in Yala Block I at present.

Reflections OF THE WILD



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Image courtesy NatGeo/Ammonite UK.

Inner cover: Leopard rock at Chaaya Wild. Image courtesy of Paul Goldstein.

Back cover: Leopard at Diganwala. – C.J.