

# Studies on the development of allomothering behaviours in orphaned juvenile Asian elephants (*Elephas maximus*) in a rehabilitation centre in Sri Lanka

By Eluned Hyde (4<sup>th</sup> Year BVetMed, RVC)

The Asian Elephant (*Elephas maximus*) is listed as 'endangered' by the IUCN, due to a rapid population decline over the past 3 generations, largely due to habitat destruction and poaching. Up to 3 elephants per week are killed in Sri Lanka due to conflicts with humans, often leaving behind orphan calves. The Elephant transit home (ETH) at Uda Walawe, amongst others, is working to conserve this species and its primary role is to rehabilitate orphaned elephants to prepare them for release into the wild.



Older female elephants stood over younger calves while they slept

The ETH currently homes 47 elephant calves between the ages of 3 months and 6 years, all being prepared for release. The calves' survival in the wild is dependent on how well they are habituated to life outside the transit home at the time of release; so there is minimal human contact and the calves have the freedom to move between the home and the forest. The centre is situated in the Uda Walawe National Park to maintain familiarity with their habitat, whilst still allowing them to have access to food and medical care.

In the wild elephants are born and reared in stable family units with matriarchal dominance which supports the development of natural maternal behaviours. Both African and to some extent Asian



The youngest female calf Sirimali following her 'allo-mother' Grusha

elephants have been observed to exhibit allo-mothering within their herd in the wild. 'Allo-mothering' is defined as mothering behaviour performed by any group member other than the mother or genetic father and thus is distinguished from parental care. The orphaned calves reared at the ETH without adults may or may not develop these maternal behaviours, which are essential for future life. Without these skills orphaned female calves may struggle to raise calves of their own once released into the wild.

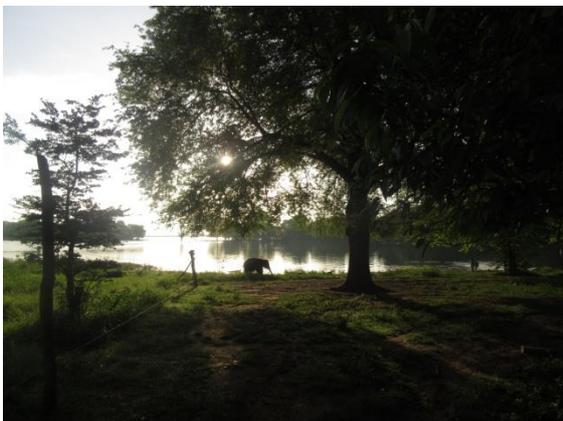
It had been noted by the herdsmen working at the ETH that some of the older female calves in the group were starting to exhibit what they classified as 'mothering' behaviour towards younger, newly introduced calves. I went out to the Elephant Transit home to spend time observing the group in their natural environment and to record if any allo-mothering occurred within the group. For my first two days at Uda Walawe I observed the group as a whole, this allowed me to familiarise myself with their behaviours and also allowed the elephants to familiarise themselves with a new imposter watching them! At this point I came up with 2 distinct behavioural types that I classified as allo-mothering; 'physical contact' and 'protective behaviour', these were then further split into sub-categories.

After studying the records at the ETH I identified the 6 oldest females and 6 oldest males, these ranged from 4-6years old. I then observed and recorded any behaviour that they exhibited to the youngest calves. Each time a mothering behaviour occurred the type, duration and which calf the behaviour was directed at was recorded. Each animal was observed for a total of 8 hours throughout my four weeks. The males were used as controls as they were not expected to exhibit allo-mothering and were generally not as interested in the younger calves as the females. I observed several displays of allo-mothering between older females and younger calves while at the ETH. Some of the females showed more mothering behaviours than others and some were noted to favour particular young calves. There were 4 calves under 2 years old and data was also collected at intervals throughout the day from these.



The elephants were sprayed with an animal-friendly, waterproof paint so I could identify who was who, this is Anurhadna, an 18 month old male calf

Each day I went into the forest with 2 herdsman who were employed to stop the herd going too far into the park and to bring them back every 3 hours for feeding. Although the language barrier often made communication a little difficult they were invaluable in my research! Each day they helped to identify which calves I needed to observe; they knew the name, age and sex of each of the 47 calves just from looking at them. They would help me find my way back each day, alert me to wild elephants nearby and often bring me snacks of local fruit they had picked from the trees! During my time at Uda Walawe I stayed with a local family and two veterinary students from the vet school at the University of Peradeniya, it was a great way to immerse myself into the local culture. I ate home cooked Sri Lankan food every day, learnt some Sinhalese phrases and went to a nearby Buddhist festival with them. They were so hospitable during my stay and I hope to stay in contact with them for many years to come.



Uda Walawe National Park – the herd were released into the park each day and were brought back to the home for feeding



The lovely Niroshana family who I stayed with during my time at Uda Walawe

I spent a total of six weeks in Sri Lanka which gave me chance to do some work at a veterinary clinic, collect my research, travel around a beautiful country and most importantly meet some amazing people. I am overwhelmingly grateful to the BVA Overseas Travel Group for their generosity in allowing my trip to happen!