

ELEPHANT DRIVES IN SRI LANKA

Jyantha Jayewardene
Mahaweli Enterprises Development Agency
8th Floor, Unity Plaza
Galle Road, Colombo 4, Sri Lanka.

INTRODUCTION

Conflicts between man and elephant have been reported even a long time ago. Hereport (1669), Knox (1681), Schweitzer (1682) and Heydt (1744) record a number of such instances. These conflicts were not of a serious nature then since there were only small human populations living in isolated villages in large tracts of jungle. With increasing population it became necessary to clear some of these jungles for human settlement and agriculture. With the habitat of the elephant reducing progressively the man-elephant conflicts increased and assumed serious proportions with the deaths of both humans and elephants and the destruction of crops.

ELEPHANT DRIVES

With increasing man-elephant conflicts being reported from all over Africa and especially Asia, those engaged in elephant management and conservation are hard put to find solutions to these snowballing problems. A number of solutions to these conflicts have been attempted. One method that has been used in a number of Asian counties is to drive the offending elephants to another location where they would not cause problems. Though this seems an easy enough solution there are a number of practical problems that have arisen whilst attempting to drive elephants to other locations. This paper discusses the many elephant drives that have been undertaken in Sri Lanka. It discusses the problems and constraints to successful elephant drives and makes some suggestions that could help to overcome some of these problems and constraints. This paper also discusses some of the elephant drives that have been conducted in India and Indonesia, and compares the Sri Lankan experience with those drives.

Sri Lanka

The initial efforts of the Department of Wildlife Conservation to drive the elephants away was successful but only temporarily. The elephants kept coming back and the problem continued. It became apparent that driving elephants away was not going to be a permanent solution. The elephants that were causing trouble would have to be moved to another location where they need not come in contact with man.

The Department of Wildlife Conservation considered moving out the pocketed

elephants to other locations on a more permanent basis. The options were to drive them to new habitats or to capture and translocate them. Over a period of time the Department of Wildlife Conservation has adopted the drug immobilization and capture technique and the driving of elephants on foot, as methods of translocating elephants. Immobilization allowed only one elephant to be caught and moved at a time, whereas groups of elephants could be moved by driving them.

TABLE I. ELEPHANT DRIVES UNDERTAKEN BY DEPARTMENT OF WILDLIFE CONSERVATION IN SRI LANKA

DATE	FROM	TO	NUMBER DRIVEN	NUMBER RETURNED
1974	Angunukolapelessa Uda Walawe RB	Gonnoruwa Forests	21	none
1978 & 1979	Mahaweli H4 & H5	Wilpatu N.P.	130	40-50 @
1982 / 83	Resvehera forest and Mahaweli H2	Wilpatu N.P.	76	7 - 10
May 1988	Mahaweli System B	Maduru Oya N.P.	150	Over 100
1989	Sevanagala Sugar Cane Project	Uda Walawe N.P.	250	7 - 10 *
Aug/Sept 1990	Laggala/Naula areas	Wasgomuwa N.P.	62	All
Sept 1990	Naula/Kongahawela areas	Giritale Reserve Yala Park IV	12	2
Oct 1990	Pubbiliya area	Wasgomuwa N.P.	65	22
Nov 1991	Bundala/Gonnoruwa Pubbiliya areas	Yala Block IV	60-70	60-70
1993	Hasalaka	Wasgomuwa N.P.	30	NA #
1993	Damana		25	NA #
1993	Anamaduwa/Nawagattegama	Wilpattu N.P.	40	NA #
1993	Nintavur		25	NA #

Source : Department of Wildlife Conservation and personal records

@ Some of these are the elephants driven from Anamaduwa / Nawagattegama in 1993

* Effective electric fence

No record yet

NB: Other drives involving less than 10 elephants have also been undertaken by the Department of Wildlife Conservation

A number of efforts at driving elephants, made by the Department, have met with some degree of success in solving pocketed elephant problems. The Departmental staff have gained much practical experience over the years in the translocation of elephants. Though initially the drug immobilization and capture exercises and the drives were not completely successful, successes tended to increase with experience. Table I details the major elephant drives carried out in Sri Lanka so far.

In 1969/70 the Departmental staff, with the help of a professional elephant trapper, captured 10 elephants from the pocketed herd at Angunukolapelessa on the Right Bank of the Uda Walawe Scheme. This was a herd that had been there for a long time but with increasing land development these animals were pocketed. Over time their numbers were gradually reduced. The last of these, a herd of 21 elephants with 2 calves, was driven to the safety of the Gonnoruwa-Wirawila forests in December 1974 (Jayewardene, 1994).

When the jungles in the H4 and H5 areas of the Mahaweli Systems were cleared and developed, several herds living in those jungles caused problems in the new settlement areas. In 1978/79 the Department of Wildlife Conservation was called upon to drive out about 130 of these elephants which consisted of several herds. The elephants were rounded up from distant places like Angamuwa, Rajangane, Tambuttegama, Ottappuwa and Talawa and driven to tract 419 of the settlement area and out across the Puttlam-Anuradhapura highway to the Wilpattu National Park. This operation was carried out while jungle clearing, channel cutting and other construction work progressed at a rapid pace. The main objective of this drive was to prevent any elephants getting trapped (as in the Uda Walawe right bank area) in the small jungle-clad rock outcrops that would remain in the middle of the development area. This objective was realized when not a single elephant was trapped in the middle of the Mahaweli project area. However a large number of elephants came back, whilst some stayed back in the pockets of jungle on the way (Jayewardene, 1984).

In 1982/83, the Department conducted another big drive to evacuate the pocketed elephants from the Resvehera forests bordering the Mahaweli H2 area to the Wilpattu National Park about 40 miles away. Of the 100 odd elephants that were pocketed at Resvehera, 76 elephants in two herds (48 + 28) were moved on foot through Galgamuwa, Giribawa, Nawagattagama, Tabbowa, Puliyankulama to Wilpattu past Kala Oya. As the rehabilitation programme was not continued, these elephants had come out of Wilpattu, and made the Tabbowa, area on the southern border of Wilpattu, their home. Some elephants came back further to the small jungles in the Nawagattagama area. The balance 30 odd elephants still remain in the Resvehera jungle pocket, which is within the Kahalla-Pallakelle Sanctuary, and continue to raid fields and home gardens (Jayewardene, 1984).

In May 1988 the Department of Wildlife Conservation, along with the Mahaweli Economic Agency, conducted a pilot elephant drive in System B of Mahaweli. The drive was from the Dimbulagala Block, where the famous rock temple is located, to the Maduru Oya National Park. The herd of 23 elephants that was to be driven was comprised of five adults, seven sub adults, five juveniles, calves and six calves. There were some solitary

males roaming this area as well. These elephants had constantly wrought havoc amongst the homes and cultivations of the new Mahaweli farmers who were just settling down. In 1989 alone eight settlers in Mahaweli System B were killed by elephants.

The main objective of this drive was to take these elephants to the confines of the Maduru Oya NP. Another objective was to give the staff of the Department of Wildlife Conservation the experience necessary to enable them to take on larger elephant drives. It was also hoped to educate the Mahaweli settlers on how to protect their crops and on the need to conserve the elephants. The distance that the elephants were to be driven was approximately 20 km. The elephants were pushed along by a line of beaters who were shouting and lighting thunder flashes. By the time the herd had been driven approximately 14 km the number of elephants had doubled. The additions were other herds, loners and strays from jungle pockets dotted along the way. Ultimately the number of elephants that were driven into the Maduru Oya NP was over 150. Unfortunately the Department was not able to keep a check on the elephants coming out of the Park, due to the limited staff they had and the lack of sustained support from the Mahaweli settlers. Though some animals stayed back most of the elephants have come out of the Maduru Oya NP and got into the small pockets of jungle both within and on the periphery of Mahaweli System B (Jayewardene, 1990).

In 1989 the Sevanagala Sugar Company decided to drive the elephants, which numbered over 250 animals at one stage, from within the sugar cane area to the Uda Walawe National Park. It seems that over a period of time most of these animals had come into the Sevanagala plantation from the Uda Walawe NP and its environs. With plenty of food (sugar cane) and water and a relatively undisturbed existence, there was no reason for the elephants to leave. A group of elephant chasers were hired and they succeeded in driving the elephants to the Uda Walawe NP. Now there is an electric fence along the periphery of the Uda Walawe NP and no elephant can leave it and go across the road into the sugar area. However some elephants manage to creep under natural depressions or waterways that run below the fence, especially the Mau Ara river.

In late 1990 the Department of Wildlife Conservation decided to drive the elephants that had come from the Dambulukele forest and roamed the Laggala, Naula and Kabarawa areas, across the Amban Ganga to the Wasgomuwa National Park. These elephants were causing a lot of damage to crops and human habitations. They were even a threat to the lives of the villagers who were engaged in the protection of their crops. The drive was to be in three stages.

The first stage was started on the 15th August 1990. The Department obtained the cooperation of the Police to carry out this operation. The drive started off by collecting the elephants from the Laggala and Naula areas and driving them to the Wasgomuwa NP. Around 50 elephants were driven across the Amban Ganga to the Park whilst some elephants escaped the cordon and remained on the left bank of the river. All these were males moving singly or in pairs.

The second drive was an effort to move twelve elephants rounded up from the Pubbiliya, Naula and Kongahawela areas to the Giritala Nature Reserve. This drive was started on the 20th September 1990 and completed with reasonable success.

The third stage of this drive was started on the 3rd October 1990 when initially 65 animals were driven towards the Wasgomuwa NP but only 43 were successfully driven across the Amban Ganga into the Park.

The major problem concerning these drives were the heavy rains that fell during this period. In review it seems that these drives were carried out too fast in an effort to move the animals to the reserves quickly. As a result a number of elephants that were in small pockets of jungle had inadvertently been left out of the groups that were driven. There were no measures taken to ensure that the elephants did not come back to where they were originally. The route that the elephants would take back was not blocked, mainly due to constraints of time and manpower. This meant that these elephants would have to be driven again (Jayewardene, 1992).

In November 1991 the Department of Wildlife Conservation decided to drive the elephants from the Bundala, Gonnoruwa, Ridiyagama and Muttala areas, across the Wirawila-Wellawaya road at a point south of Talamanwila, towards Block IV of the Yala NP. By the time the elephants were driven across the main road and the Krindi Oya, the Department had gathered 60-70 elephants. The Yala-Tissamaharama-Wirawila areas experienced incessant rains during the period 14th to 20th November, which was the time the drive was underway. As a result, the drive could not be contained and had to be abandoned. No fires could be lit along the road as was planned, to prevent the elephants from backtracking. The elephants came back after a while and are now in their old haunts. Some animals may have ended up in the Uda Walawe National Park. The elephants, prior to returning, spent a short period in the area between the main Talamanwila road and the Menik Ganga as the cultivations there afforded them a new source of food. As a result of their close association with man and the annoyance caused to them, the elephants have largely lost their fear of humans. These elephants have killed over ten people since their return to their former habitats (Jayewardene, 1994).

India

Around November 1980, elephant depredation became a serious political issue in the Naxalbari area of North Bengal, where a herd of around 60 elephants had for the previous two months been sheltering during the day in an isolated forest patch of around 22 ha called Uttam Chandar Chant, and raiding crops at night all round. Even a thousand men working with conventional scare instruments failed to check this nightly depredation (Lahiri-Choudhury & Bardhan Roy)

It was then decided to try a *Kedda* type drive to chase these elephants back to

Mahananda sanctuary around 30 km away, from where they had come. It was decided to start an operation solely on the Forest Department's resources by using control *Mela Shikar* technique, ie. chasing and scaring wild elephants from their day-time resting place, without actually capturing any. (Normally *Mela Shikar* means capture of wild elephants by noosing during the day time). The presumptions of this operation were that these animals, bold and impervious to conventional scare tactics at night would have a different reaction during the day. Further, these herds used to *Mela Shikar* capture would naturally flee from tamed elephants used for *Mela Shikar* (Lahiri-Choudhury & Bardhan Roy).

On the first four days the operation started early in the morning and stopped around 10.00 am. This allowed the herd to settle down to its normal mid-day rest. From the fifth day the chase was started around 2.00 pm and soon the herd left the patch and went back to the sanctuary. A permanent *koonkie* (tamed monitor elephant) squad was placed at the narrow exit to prevent the wild elephants from coming back.

In 1986-87 a herd of about 10 elephants moved into Madhya Pradesh from Bihar and regular attempts were made to drive these elephants back. The drive succeeded only to move the elephants to another patch of forest but not to Bihar where they came from. They were driven twice to the Bella Tiger Reserve in the hope that they would stay on there but they did not do so. Finally it seems that these elephants were all captured and moved (D. K. Lahiri-Choudhury, Pers. comm.).

In 1987 the Tamil Nadu Forest Department carried out the only elephant drive that was successful so far in India. It consisted of a family group of ten or so animals. This was reported in *The Bombay Natural History Society Journal, Hornbill*. Lahiri-Choudhury informs me that in West Bengal they have been trying since 1987, to drive away a group of fifty odd elephants every year during the dry season when they come to south-western Bengal. However these drives have not been successful. The drive distance is about 50 miles but since the drive route is through scattered and wide-spread forest blocks the tendency has been for the elephants to break away and disperse. This is in spite of having used local tribals who have experience with elephants and *koonkies* or monitor elephants.

It is now reported however that this same herd was driven successfully from the northern limits of greater Calcutta. Lahiri-Choudhury makes the distinction between driving straying herds of elephants back to where they came from and driving elephants from their regular home range to new habitats. It is much easier to drive elephants to where they came from rather than drive them away from habitats that they have been used to for a long time. The tendency is for the elephant to return instinctively.

Indonesia

According to Charles Santiapillai (pers. comm.) in Sumatra there were at least two elephant drives. One termed '*Operation Ganesha*', took place in November/December 1982. In this drive 232 elephants were driven from a forest in the province of Sumatra Selatan

(South Sumatra) to a reserve called Padang Sugihan (75,000 ha). A battalion of army troops, several helicopters, earth moving equipment, Forest and Nature Conservation personnel and many hundreds of the local population were mustered for this elephant drive (U Myo Swe, 1984). It was thought that the patch of forest had only 80 elephants but when the animals were flushed out, 232 animals emerged, thereby proving the original estimates wrong. (A similar situation in Sri Lanka is referred to earlier where in Mahaweli System B it was presumed that there were 23 elephants to be driven. At the end of the drive there were over 150 elephants.) The drive, which was for a distance of 70 kilometres, took 35 days to complete. The Padang Sugihan Game Reserve now has an artificially high elephant density of 3.2 per sq. km. This reserve is situated between two rivers which form its western and eastern boundaries (Charles Santiapillai, pers. comm.).

Subsequently there was another drive in 1984 called *Tata Liman*'. According to Charles Santiapillai, this operation involved moving about 74 elephants from Sumatra Selatan to the Way Kambas Game Reserve in the adjoining province of Lampung. The distance was about 50 kilometres. This reserve is about 1,200 km² and is now a National Park. At least 40 odd elephants were driven into the reservation. This operation took almost eight months to complete, since it involved driving the elephants across cultivated areas, inhabited by people. Electric fences were used to contain the elephants en-route across this man dominated landscape. It was an exciting but risky effort since this involved a danger to the human population along the route. A number of elephants escaped and are presumed to have returned to their old haunts. Fortunately the drive to the Way Kambas Game Reserve was across its western boundary which is a river called Way Pegadungan. This river though not very broad acted as a psychological barrier to the elephants once they were driven in. One adult female with a calf refused to budge without its calf when the latter was accidentally separated from the rest of the group (Charles Santiapillai, pers. comm.).

Discussion

The elephant drives conducted by the Department of Wildlife Conservation so far show that:

- The long distances the elephants have to be driven makes drives impractical because the drive route must always go through human habitations and cultivations. This is because of the 'pocketed' nature of the habitations from which the elephants have to be driven. Limited finances prevent payment of compensation to those affected by the damage done by the elephants being driven.
- The shortage of experienced and trained staff make a long drive very difficult to sustain successfully. This is compounded by the local population who keep getting in the way, both in their efforts to help and through curiosity, and thus prevents a smooth drive by endangering their lives.

- Inadequate finances prevent the mobilization of a large force of men necessary to help as beaters and to form a complete human semi-circle to help drive the elephants forward and also prevent back tracking.
- The lack of adequately trained staff in sufficient numbers to help keep the elephants confined to their new locations for a period long enough for them to get used to their new habitat is also a constraint. The elephants instinctively and through fear back track and the problem recurs.

The objective of an elephant drive is to move elephants permanently away from areas where they are causing problems. There are two types of drives. One is to drive straying herds back to where they came from and the other is to drive elephants away from their home range to new habitats. However, before driving elephants, it must first be ascertained whether by shifting them to another jungle habitat the elephants would not create the same problems in the new area. This would then mean that the problem has been shifted to another location instead of being solved.

Though speed in conducting an elephant drive is necessary, speeding a drive tends to miss out the elephants in the small pockets of jungle along the route. Close surveillance is necessary if these elephants are also to be driven and to prevent some of the elephants that are being driven from straying back to these jungle pockets.

The weather too plays an important part in an elephant drive. Wet weather prevents a concerted and effective effort on the part of the beaters. The rain also prevents the lighting of fires necessary at night to prevent the elephants from back tracking. Elephant drives should always be conducted during the dry weather because conditions underfoot during rainy weather are such that dry fuelwood is not freely available to light the big bonfires at night. If a drive goes on for a long period, the elephants being driven gradually lose their fear and become more and more bold and aggressive. Given the rapid development of the land around the elephant habitats, elephant drives become progressively more difficult and impractical. The only other solution is translocation or taming after immobilization.

India does not seem to have attempted to drive any herds of elephants that were more than ten in number, except in the first instance quoted, whereas in Sri Lanka much larger concentrations of elephants have been driven. The success of an elephant drive is not in driving a number of elephants to a particular location. Success must necessarily be measured by the number of elephants that remain in the place they are driven to and do not attempt to come back or retreat into another patch of forest.

Koonkies or tame monitor elephants have been used in India to effectively keep the elephants within the new habitat to which they have been driven. In a number of Asian countries tame elephants are used in the capture and movement of wild elephants. In Sri Lanka tame elephants were used for the *kraal* type captures of the past. Now they are used to assist in the capture of wild elephants after drug immobilization but not for elephant

drives or to help keep the driven elephants in their new location. The Department of Wildlife Conservation should consider using trained elephants for elephant drives and to contain them in the new location after the drive.

Experiences in both Indonesia and Sri Lanka show that the original estimates of the elephants to be driven have not been accurate. These are estimates of elephants located in a relatively small area. If it is difficult to count elephants in a small location it would necessarily be more difficult to obtain an accurate estimate of the elephants in the whole of Sri Lanka or Indonesia or for the matter in any country.

It is interesting to note that in Indonesia they have used electric fencing to keep the elephants from going back whilst the drive was on. This would have helped to contain the elephants when the drive was stopped for the nights and for the staff to rest. It is also useful when the rains set in or there is some other reason to suspend the drive temporarily. This is a very effective method of keeping the elephants at bay, if only temporarily. How practical this method is in the Sri Lankan context has to be ascertained.

I am thankful to Prof. D. K. Lahiri-Choudhury and Dr. Charles Santiapillai for information given to me, based on their personal experiences of elephant drives conducted in India and Indonesia respectively.

References

- Hereport 1669 *A short description of a 9-year East Indian journey* translated by R. Raven-Hart 1953 National Museums of Ceylon translation series (Germans in Dutch Ceylon). 1: 25-36
- Heydt J. W. 1744 *Heydt's Ceylon*. Printed at the Government Press, Colombo. 1952
- Jayewardene, J. 1984 *Conservation Amidst Development*. Tigerpaper, 11 (4): 21-26
- Jayewardene, J. 1990 *Conservation Amidst Development*. Tigerpaper, 17 (2): 16-21
- Jayewardene, J. 1992 *Conservation Amidst Development*. Tigerpaper, 19 (3): 7-13
- Jayewardene, J. 1994 *The Elephant in Sri Lanka*. The Wildlife Heritage Trust of Sri Lanka, Colombo.
- Knox, R. 1681 *An historical relation of Ceylon*. 2nd. edition Tisara Prakasakayo, Colombo. 1989
- Lahiri-Choudhury, D. K. & Bardhan Roy B. K., (undated) '*Anchored Mela*' type '*Chase Without Capture*' operation in North Bengal: An exercise in anti-elephant depredation method Mimeo.

Schweitszer, C. 1682 *Journal and diary of his six years journey*. Translated by R. Raven-Hart 1953 National Museums of Ceylon translation series (Germans in Dutch Ceylon) 1: 37-82

U. Myo Swe, 1984 *Assignment report on wild elephant capture and training in Indonesia*. UNEP, Jakarta.

