

SOME OBSERVATIONS ON ELEPHANTS IN THE RUHUNA NATIONAL PARK, SRI LANKA

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INTRODUCTION

The Ruhuna National Park (RNP) is situated in the southeastern corner of Sri Lanka. Elephants have been its main attraction, though many other large mammals such as the Leopard, Sloth Bear, Spotted Deer, Sambar, Water Buffalo, Wild Boar and a host of other smaller mammals, reptiles, plus over 100 species of birds have been recorded in the park. It has been my good fortune to have been able to pay periodic visits to RNP since 1950. I have carefully recorded the sightings of elephants since 1960. I make these observations as a result of personal sight records of elephants in RNP over a period of 40 years.

ELEPHANT POPULATION

Block 1 (Fig. 1) of RNP where observations were made covers an area of 140 km² and has been justly famous for its population of elephants. During the 1950's, the elephants moved out of the park during the drier months. Such localised migrations took place in three directions; (a) along the west coast, (b) to the east of Block II, and (c) to the north. Then the elephants were reasonably free to move in and out of the park. But today, owing to human population pressures and the clearing of forests, the elephants in Block I can only move eastwards into Block II without coming into conflict with man. As the RNP developed, a major attempt was made to provide water throughout the year. This was achieved by enlarging the existing water holes and by creating larger reservoirs to assure a year-round supply of water to wildlife. This in turn, attracted elephants from outside the park and more importantly, made it possible for the animals to remain within the park. A reference to Table 1 clearly shows that the number of elephant groups sighted in 1976-1991 (239) was almost double that seen during 1960-1976 (396).

There are several reasons for this apparent increase in the number of groups encountered in Block I of RNP, such as:-

1. natural increase in the population.
2. an influx of elephants from outside.
3. improved opportunities to observe elephants.

In the early 50's, we were obliged to walk to most parts of the park. As the park developed, better roads and the use of four-wheeled drive vehicles provided access to more extensive and remote areas. This made it possible for us to observe much more of the wildlife including the elephant.

Given my observations dating from 1950, I feel that the Block I of RNP supports a resident population of about 80-100 elephants, with numbers reaching a maximum of 140 from December to April. The best time to observe elephants is February, for the elephant numbers appear to reach a peak between February and March (Fig. 2). Since the park is usually closed to the public from September to October, my visits have been minimal and will not provide a reliable estimate of the elephant number and density for this period.

ACTIVITY PATTERN

It has been the usual practice of visitors to the RNP to do two tours into the park during the day, between 0600-0900 hrs and 1500-1800 hrs. Most published reports on animals in the park refer to these periods as being the times of peak activity even for the elephants.

This was the pattern of activity for the elephants during 1960-1975 period. Of course, herds of elephants do visit the water holes during the hottest period of the day, especially if there were calves present. A tour round the reputed water holes between 1130 and 1330 hrs always brought results depending on the availability of water in the park. During the rainy season, we did not see the herds utilizing these water holes as there was plenty of water throughout the park.

But when considering the period from 1975-1991, another factor must be taken into account. It was the tremendous increase in the number of tourists visiting RNP, leading to a great disturbance of the elephant herds. The elephants in Block I of RNP soon found that they could come to drink from the water holes in relative peace between 1130 and 1330 hrs. As time went on, we began observe more elephants during the mid-afternoon period. It is my belief that the herds changed their activity pattern, so that we now have an additional peak during mid-day.

| Period | Time of mid-day activity | Number of elephants |
|-----------|--------------------------|---------------------|
| 1960-1975 | 1130-1330 hrs | 144 |
| 1975-1991 | 1130-1330 hrs | 347 |

This of course does not apply to the activity pattern of solitary bulls, and we must consider the increase of elephants in the park.

Table 1. Frequency & Group Size of Elephants in RNF.

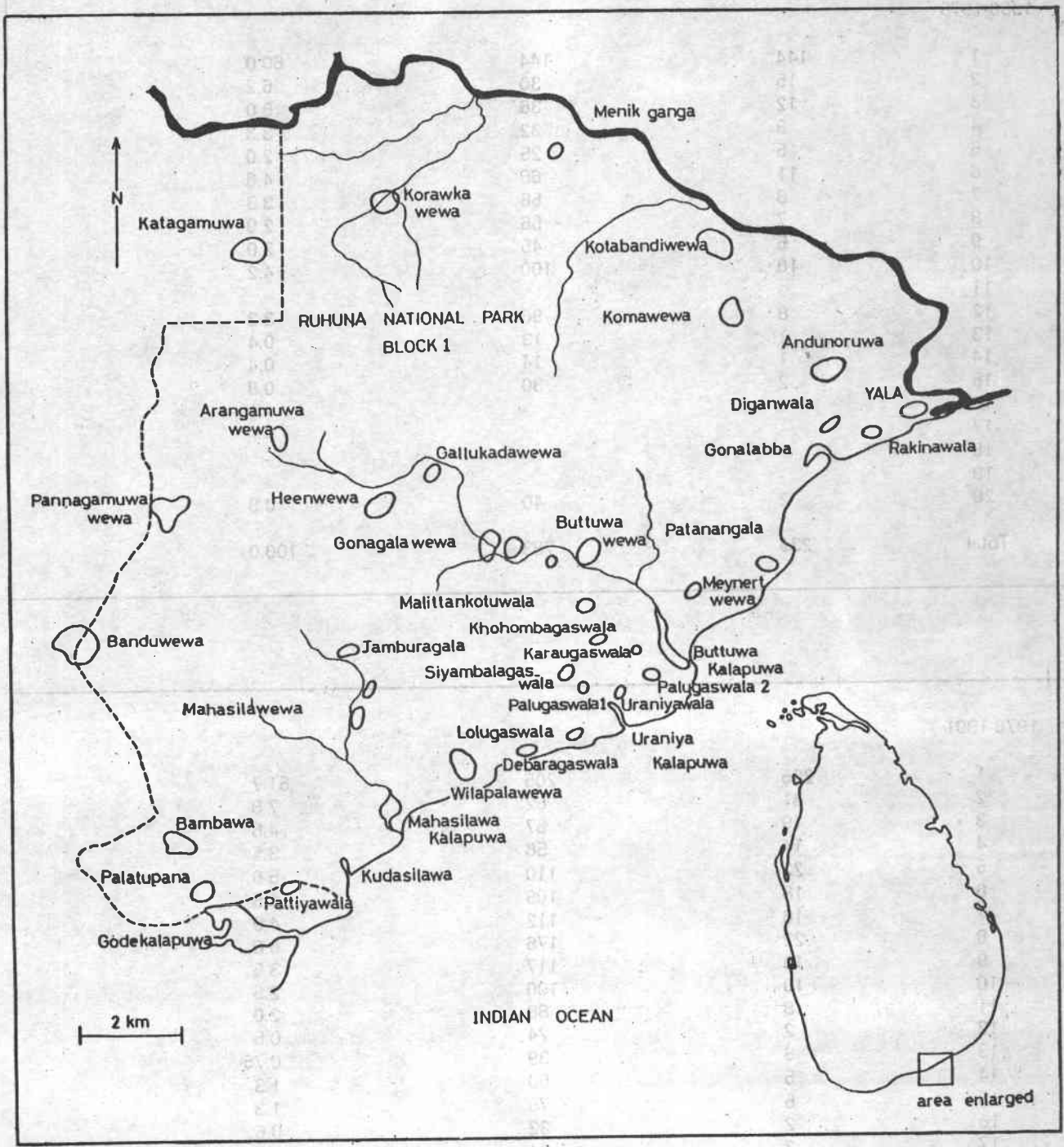


Fig. 1. Map of Block I of Ruhuna National Park, Sri Lanka, showing the location of the main waterholes.

Table 1. Frequency & Group Size of Elephants in RNP.

| Group Size | No. of Groups | Total Number | Frequency of Groups |
|------------|---------------|--------------|---------------------|
| 1960-1975 | | | |
| 1 | 144 | 144 | 60.0 |
| 2 | 15 | 30 | 6.2 |
| 3 | 12 | 36 | 5.0 |
| 4 | 8 | 32 | 3.3 |
| 5 | 5 | 25 | 2.0 |
| 6 | 11 | 66 | 4.6 |
| 7 | 8 | 56 | 3.3 |
| 8 | 7 | 56 | 2.9 |
| 9 | 5 | 45 | 2.0 |
| 10 | 10 | 100 | 4.2 |
| 11 | - | - | - |
| 12 | 8 | 96 | 3.3 |
| 13 | 1 | 13 | 0.4 |
| 14 | 1 | 14 | 0.4 |
| 15 | 2 | 30 | 0.8 |
| 16 | - | - | - |
| 17 | - | - | - |
| 18 | - | - | - |
| 19 | - | - | - |
| 20 | 2 | 40 | 0.8 |
| Total | 239 | 783 | 100.0 |

| | | | |
|-----------|-----|------|-------|
| 1976-1991 | | | |
| 1 | 205 | 205 | 51.7 |
| 2 | 31 | 62 | 7.8 |
| 3 | 19 | 57 | 4.8 |
| 4 | 14 | 56 | 3.5 |
| 5 | 22 | 110 | 5.6 |
| 6 | 18 | 108 | 4.5 |
| 7 | 16 | 112 | 4.0 |
| 8 | 22 | 176 | 5.6 |
| 9 | 13 | 117 | 3.5 |
| 10 | 10 | 100 | 2.5 |
| 11 | 8 | 88 | 2.0 |
| 12 | 2 | 24 | 0.5 |
| 13 | 3 | 39 | 0.75 |
| 14 | 5 | 60 | 1.3 |
| 15 | 5 | 75 | 1.3 |
| 16 | 2 | 32 | 0.5 |
| 17 | 2 | 34 | 0.5 |
| Total | 396 | 1455 | 100.0 |

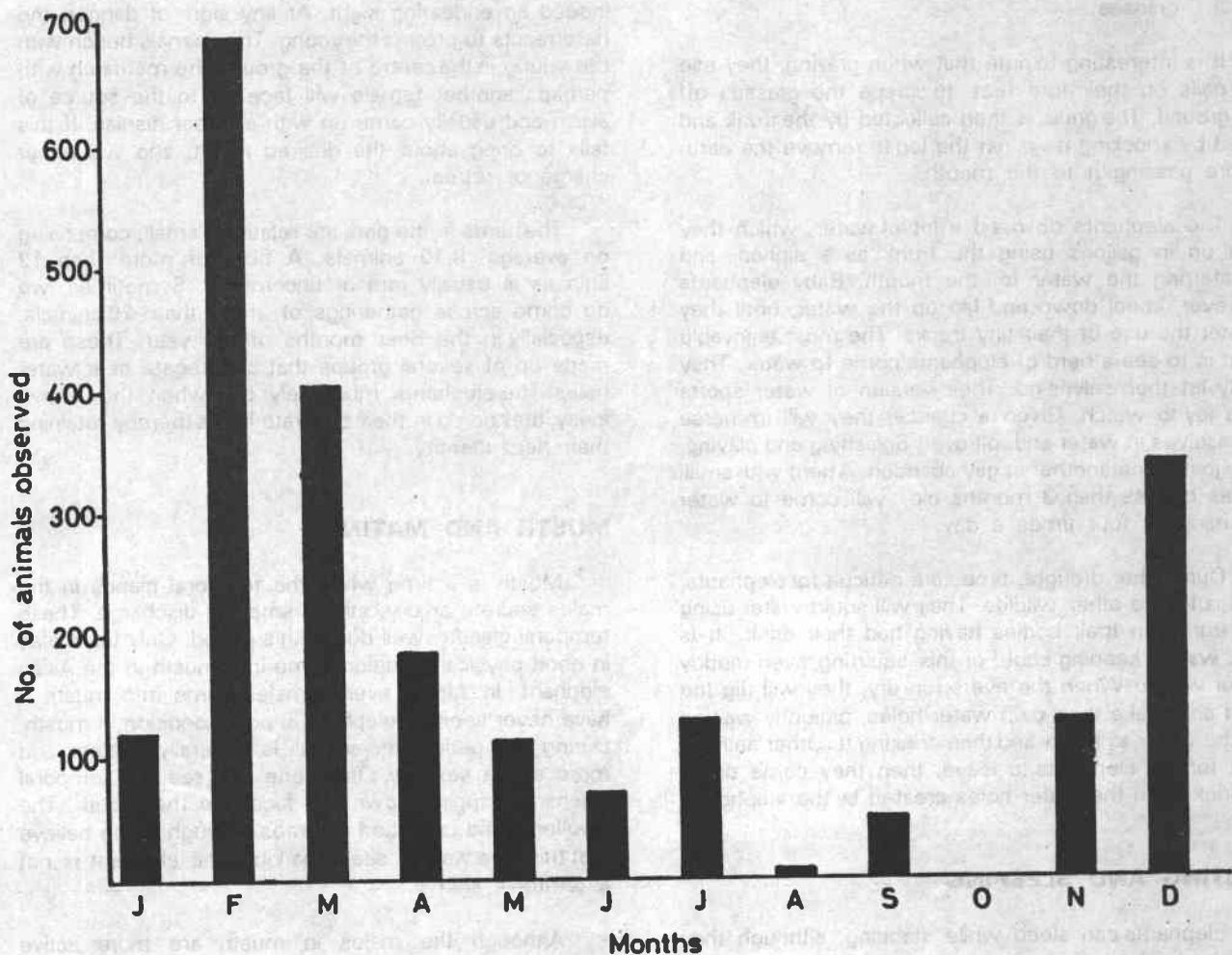


Fig. 2. Monthly totals of elephants seen in Block I of Ruhuna National Park.

FEEDING AND DRINKING

Elephants can and do travel several kilometers in a day. When actively on the move, they do not feed much but take a few branches as they go along. It is amazing that a herd of such large animals can travel so silently. Only an occasional squeal of a calf gives them away. When not on the move, most of the elephants spend time feeding, usually about 150 kg of wet food per day. Consuming such an enormous amount of vegetation in a day is no mean task. Elephants are known to spend between 17-19 hrs per day feeding on more than 100 species of plants. Feeding occurs at different levels:-

1. branches of trees
2. shrubs
3. grasses

It is interesting to note that when grazing, they use the nails on their fore feet to scrape the grasses off the ground. The grass is then collected by the trunk and sifted by knocking it against the leg to remove the earth before passing it to the mouth.

The elephants do need a lot of water, which they take up in gallons using the trunk as a siphon, and transferring the water to the mouth. Baby elephants however, kneel down and lap up the water, until they master the use of their tiny trunks. The most enjoyable sight is to see a herd of elephants come to water. They really let themselves go. Their version of water sports is a joy to watch. Given a chance, they will immerse themselves in water and roll over. Splashing and playing, they jostle one another in gay abandon. A herd with small calves of less than 3 months old, will come to water as many as four times a day.

During the drought, times are difficult for elephants, as it is for the other wildlife. They will squirt water using the trunk, on their bodies having had their drink. It is their way of keeping cool. For this squirting, even muddy water will do. When the rivers run dry, they will dig the sand and make their own water holes, patiently waiting for the water to fill up and then drinking it. Other animals wait for the elephants to leave, then they come down to drink from the water holes created by the elephants.

RESTING AND SLEEPING

Elephants can sleep while standing, although they can also lie down if necessary. At most times, they sleep standing leaning on a tree. They do sleep lying down and they do snore! Calves usually sleep lying down in front of the mothers' forelegs, and once they are bigger, under the mothers' belly. A herd of elephants will not move away until the tiny baby wakes up. They show a great deal of tolerance. Periodic stops are made when on the move, to allow the little ones to feed and rest.

HERD STRUCTURE

A herd of elephants is essentially a family unit, consisting of an elderly female (or the matriarch) and her related offspring. The males leave the herd when they are about 8-10 years old. They may linger close to the parent herd for a year or more, until finally going off on their own. I have never come across sub-adult male groups in RNP as those described in the African parks. But we do see associations between 2 or 3 adult bulls. Generally, lone bulls are the rule and are often encountered in the park.

Calves enjoy a special place in the herd. They are cared for by the "nursery unit" of the herd. A baby elephant is suckled by more than one adult female. To watch a female let another female's calf to feed is indeed an endearing sight. At any sign of danger, the herd reacts to protect the young. The animals bunch with the young in the centre of the group. The matriarch with perhaps another female will face up to the source of alarm and usually come up with a threat display. If this fails to bring about the desired result, she will either charge or retreat.

The herds in the park are relatively small, comprising on average, 8-10 animals. A herd of more than 12 animals is usually rare or uncommon. Sometimes, we do come across gatherings of more than 20 animals, especially in the drier months of the year. These are made up of several groups that congregate near water holes. The elephants mix freely but when they move away, they do so in their separate herds thereby retaining their herd identity.

MUSTH AND MATING

Musth is a time when the temporal glands in the males secrete an oily, strong smelling discharge. These temporal glands swell during this period. Only the males in good physical condition come into musth in the Asian elephant. In Africa, even females come into musth. I have never seen an elephant in poor condition in musth. During this period, the animal is generally restless and more active sexually. Often one can see the temporal discharge dripping down the face into the mouth. The swollen gland is rubbed on trees. Though some believe that this is a way of scent-marking, the elephant is not a territorial animal.

Although the males in musth are more active sexually, those not in musth also mate. I have observed that the largest number of males in musth was seen during February-March. Mating takes place in typical quadruped manner and the act of mating takes only a minute or two at the most. It is interesting to note that the other females in the herd show some degree of excitement during the mating, which usually culminates in a bout of trumpeting.

Elephantine pregnancy lasts about 22-24 months and the birth of a calf is quite an event for the rest of the herd. The movement of the herd becomes restricted and the herd becomes more apprehensive. The youngest calf seen by me in RNP was two weeks old. Unfortunately, this calf died during the severe drought in 1976.

TUSKERS

Tuskers were a very rare sight during the early period. The first Administration Report of the Department of Wild Life in 1950 states that only 2 tuskers were observed in the park. More tuskers were seen in the 60's and now there are quite a few in the park. I can personally identify 16 tuskers and the Department estimates the number to be about 22. It is indeed a good sign to have so many tuskers but they must be driven into the park whenever they are seen close to the park boundaries. This is imperative if the tuskers are to have any chance of survival.

CHANGES IN BEHAVIOUR

The most dramatic change that I have observed has been the change in the behaviour of elephants. Forty years ago, the lone bulls in the park were an aggressive lot. Almost always, they gave us anxious moments when seen at close quarters. At least a threat display or the mock charge was the order of the day. The herds reacted in the expected manner, to get away from man as soon as possible.

The "Stay In Your Vehicle" rule was enforced in the 1950's and the animals were quick to realise that vehicles were harmless mobile objects. It was not long before that lone bulls began to take no notice of parked vehicles. Today, they walk right up to the vehicle and walk past the parked vehicle only a few feet away from the thrilled visitors. If the vehicle is moving, they may sometimes give chase.

The herds took a longer time to change, but change they did. During the earlier phase, the matriarch with another female or two began to give chase to vehicles. The protective instinct with threat display became the rule. As years went by, the herds became more and more accustomed to the vehicles as long as they did not move. Today it is a common sight to see tourist vehicles surrounded by a herd of elephants. One could

observe the family life of these animals with impunity. If you leave the elephants in RNP alone, they will most certainly leave you alone and go their way. This change from aggressive behaviour to acceptance has been the most dramatic change over the years.

FUTURE PROSPECTS

The elephants in RNP face few dangers as long as they remain within the park. The tuskers must be driven into the park if they are observed along the periphery. This will reduce the conflicts with man and thus enhance the long term survival prospects of the tuskers. The herds too will come into conflict with man if they move out of the park into the cultivated areas. The greatest threat to the elephants will be the loss of habitat. Thus, the RNP must never be allowed to be reduced in size.

Today, RNP being one of the few parks that are open to the public, overvisitation poses another danger to the elephants in the park. The herds are disturbed especially when they come to the water holes; sometimes they are even denied access to these crucial areas by the visitors. This has a drastic effect especially on the calves during the drier months. The fouling up of water holes by buffalo may also pose a threat to the elephants during the drought.

The introduction of translocated elephants poses yet another problem. Most of the translocated elephants are adult bulls that had come into conflict with man. Nearly all are aggressive and some are even known to be man killers. The introduction of such potentially dangerous animals into the park may not only pose a threat to the visiting public but may well have a bad effect on the non-aggressive lone bulls in the park. A change in the behaviour pattern could be disastrous. It is my hope that if these loners must be translocated into the RNP, they be released instead into either Block II or III but not into Block I.

There had been only one fatal accident in the park over the last 50 years. Let us not harass our elephants in the park by deliberately provoking them for the sake of taking a few photographs or films. Today, a few tourist jeeps do the most damage for a Few Dollars More! If this is not checked, an accident is bound to happen and that too very soon. There must be some sort of control, if we are to avoid a calamity. As I mentioned earlier, the elephants in the park are a peaceful lot. Let us therefore keep them that way.