

AN UPDATE ON THE ELEPHANTS OF INTERVIEW ISLAND

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INTRODUCTION

Elephants were brought over to the Andaman Islands for forestry operations. One such forestry operation was carried out on Interview Island, west of Mayabunder on Middle Andaman Island. Since the company carrying out the operation went bankrupt, the elephants being used for the operations were released on the island in 1962. Approximately 40 elephants were released then (Sivaganesan, 1993).

Elephants are not normally found in the Andamans. Interview Island is predominantly evergreen and semi-evergreen forest, and has an area of 133.87 km² according to Forest dept. statistics (Anon, 1998). However, this calculation is based on the low tide line, and the area under vegetation is around 105 km². A percentage of this is under mangrove, which is not used by elephants; Sivaganesan & Kumar (1995) estimated the available habitat to be around 70 km². Fig. 1 shows a map of the northern part of the Andaman Islands and indicated where Interview Island is.

In 1992 these elephants were censused again. (Sivaganesan & Kumar, 1995). The number was then estimated at around 70 animals, using dung counts. This appears to represent a phenomenal rate of increase. Considerable damage to the vegetation was recorded during this study, raising concerns about the future of this population. I therefore carried out another survey in 2001.

METHODS

Local information gathered in December 2000 indicated that elephant were found in herds of 5-10 individuals (Andrews, personal communication). It was established that their movements over the island was highly seasonal, with certain areas being preferred at certain times of year. Their movements were also constrained by the proximity of water since there were limited perennial waterholes on the island. There were 9 major waterholes on Interview that were identified, and herds moved from waterhole to waterhole. *Machans* were therefore

built in January near 6 of these waterholes.

The survey was started February 16 and continued until the end of March. There were 35 census days in this period. Only the days when new individuals were sighted are shown in the tables. Because of the heavy rains preceding this period, it was found that observations from machans were not yielding much information (since water was available at many sites). Experienced trackers were then employed to quarter the forests, locate individual herds and follow them while trying to identify as many individuals as possible. It was expected that the rate of detection of new animals would level off as more and more were found: this has in fact happened. No new elephants were seen after the 17th day.

A check sheet was developed with frontal and side views of elephant where identifying features such as pale patches and scars were marked. The trackers were interviewed in depth each day, and an understanding of elephant movement on the island during that period was gained.

Grid locations were not used since at the time there was no accurate method of estimating precise locations on the island. However the names given by the local residents were used. The age categories used were calf (0.9-1.2 m), juvenile (1.2-1.8 m), subadult (1.8-2.4 m) and adult (more than 2.4 m). Since there were few animals and they were in herds ambiguity was minimized.

RESULTS

Table 1 shows the elephant sightings over time. A total of 31 elephants were counted. No new sightings were made after the 17th day, and it is expected that the number will not exceed 35. The small number made individual identification possible and capture-recapture analysis techniques using a few individually identifiable individuals were not required.

Of the ones counted there were 5 adult males, and 10 adult females. The rest were either subadults or juveniles. This contrasts with Sivaganesan's(1993) finding that there were about 70 elephants. Figure 2 plots number of elephants sighted against the number of days of observation, and it can be seen that the number of elephants plateaus out at between 30 and 35.

The differences found between this study and Sivaganesan's earlier one need explanation. The earlier study used dung transects combined with defaecation and decay rates, and only areas that had concentrations of elephants were censused for dung. This could bias the counts towards areas that had more elephants, leading to a higher calculation of density.

Since the elephants were found to be highly seasonal, a short study would not eliminate biases due to seasonal movement. Also, estimates based on dung introduce variations due to individual animals and changes in diet. Their use would be best suited to long term studies, preferably after population numbers are validated using some other method.

A second possibility is that both methods have yielded accurate estimates and there has been a population decline. One possibility is that there has been poaching; another is that the habitat has degraded and cannot support the elephant population. In fact there is some support for this point of view. The third possibility that elephants have dispersed to other islands, can be ruled out since there are no new sightings on the neighbouring islands.

Of the total adult males seen, 3 were tusker and 2 were makhna. The single juvenile male seen was a tusker. Sample sizes are too small to perform meaningful analysis to see if there is any difference. The lack of sightings of subadult males is probably an artefact of the small sample size.

The vegetation damage described by Sivaganesan has now become worse. This is discussed in detail elsewhere (Ali *et al*, in prep.) There was practically no bamboo, cane or *Pandanus* seen anywhere on the island, and these were not sampled in the transects. Several species of trees were found debarked in this study that were not recorded as eaten earlier. An analysis of the vegetation, which will be presented separately, indicates that as trees die, they are unlikely to regenerate due to browsing by another introduced species, the chital.

The condition of many of the animals seems emaciated. The logical management recommendation for Interview Island, given that the species is exotic to this island, is causing damage to the vegetation and seems to be outstripping its food supply, is removal. Culling of the larger animals is one such option; removal to the mainland after trapping is another.

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Fig. 1 Map of Northern part of Andaman Islands showing Interview Island

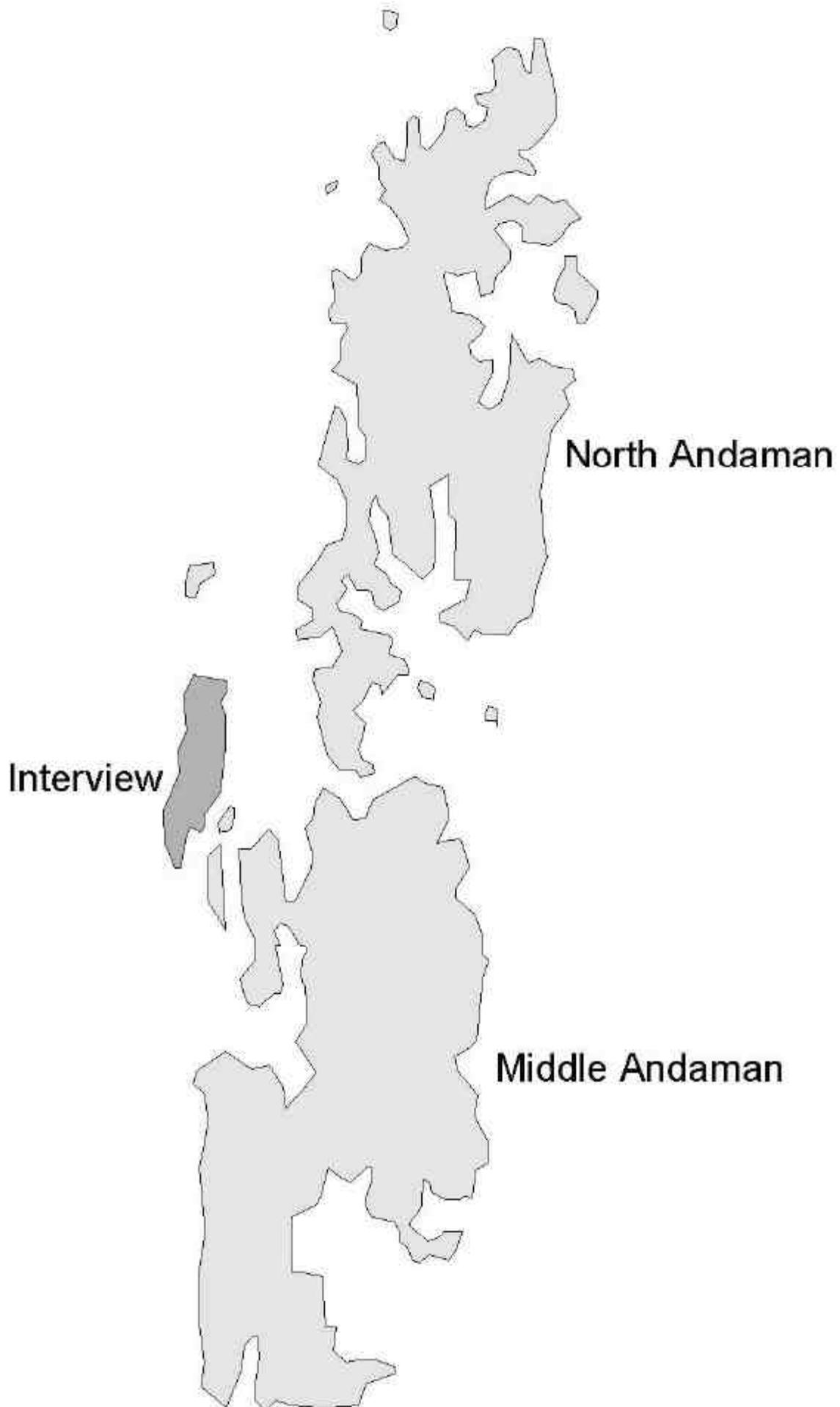


Table 1. Sighting of elephant groups on Interview Island during the study period.. AM= Adult male, AF= Adult female, SF= subadult female, JM= juvenile male JF= juvenile female, J? = Juvenile unsexed

Date	Location	HERD							Unattached adult Males		Total
		AM	AF	SF	JM	JF	J?	Calves	Single	Groups	
17-Feb	Papita Dera	2	5	3	1	1	2	2	0	0	16
19-Feb	3 Km W of FRH		2					1	0	0	3
22-Feb	1 km W of FRH		1	1			1		0	0	3
24-Feb	Tochi nullah	1	1	2			1		0	0	5
3-Mar	Asay Saka	2	1				1		0	0	4
Total		5	10	6	1	1	5	3	0	0	31

Fig. 2 Number of elephants seen with days censused

