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1. To highlight the plight of the Asian Elephant.
2. To promote the conservation of the Asian Elephant, and
3. To provide a forum for communication amongst the members of the Asian Elephant Specialist Group.

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THE SURVEY OF ELEPHANTS IN SRI LANKA

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ABSTRACT

A survey of the elephants in parts of the Southern, Eastern, North Western, Central and Mahaweli regions of Sri Lanka was carried out for six days from 23 to 28 June 1993 in order to assess the structure and composition of the elephant populations. It was also designed to train the field staff in monitoring elephants in the wild. Some 800 personnel, including volunteers from NGOs spent more than 57,000 man hours recording the elephants in the five regions.

The population structure of the elephants appears to be biased in favour of the adult animals. The proportions of the adults, subadults, juveniles and calves on an average were 51.9%, 21.8%, 15.7% and 10.6% respectively. The highest proportion of the calves (21.1%) was seen in the Southern population. The adult sex-ratio varied from 1:1 in the small population of elephants in the Central region (n=30) to 1:2.9 in the Southern population. In the four large populations, the number of bulls per 100 cows ranged from 73 in the North Western to 34.8 in the Southern regions. No tuskers were seen among the adult bulls in the Central population but the proportion of the adult bulls with tusks in the rest varied from 15.3% in the North Western to 2.8% in the Mahaweli regions. It is significant to note that although the elephant population in the Mahaweli region makes up 34.2% of the estimated population size (minimum estimate) in the five regions, yet it accounts for the lowest percentage of tuskers (0.9%). The national average for the percentage of tuskers among the adult bulls, appears to be 7.3. In Sri Lanka, even though only a small proportion of the males have tusks, yet more bulls are being killed in conflicts with man.

The most frequent grouping consisted of 3-6 animals. In addition, larger groupings consisting of 10-20 animals were also observed. The largest grouping consisted of 124 animals. The most permanent social grouping appears to be related to cows and their offspring. Both solitary bulls and groups showed a bimodal pattern of activity, with activity reaching a peak during the late evenings.

While it is impossible to be certain about the actual population size of elephants in the five regions, it is clear that there are at least a minimum of 1,967 animals. Recommendations for long-term conservation of elephants in Sri Lanka need not depend on precise quantification of its populations across the island. It is usually sufficient to know if they exist in significant numbers and thereafter, it is necessary to establish whether the populations are declining, increasing or remaining stable. The elephant is a "flagship species" whose conservation will result in the maintenance of biological diversity and ecological integrity across a large area of Sri Lanka.



**Elephants in Ruhuna National Park, Sri Lanka
(Photo: Charles Santlapillai)**

Introduction

The Asian elephant (*Elephas maximus*) is one of the most seriously endangered species of large mammals in the world. Given its enormous size and body mass, it is also one of the few species of terrestrial megaherbivores still extant. Its present geographic distribution extends from the Indian subcontinent in the west to Indo-China in the east across 13 countries including islands such as Sri Lanka, Sumatra and Borneo. The entire population in the wild is estimated to be between 35,000 and 55,000 (Santiapillai & Jackson, 1990). Even optimistic figures indicate that there are only about one tenth as many Asian as African elephants.

Throughout its range, the Asian elephant is in decline. Increasing human populations and increasing agricultural land use have considerably reduced the area available to the elephants since the turn of the century. The obvious corollary to a decrease in a species' range, is a decrease in its resource base, and for such a wide-ranging species as the elephant, this means that the animal's flexibility to buffer the effects of local resource depletion by moving out is lost (Croze, *et al.*, 1981).

In Sri Lanka, changes in land use patterns are resulting in continuous contraction of the habitat available to the elephant, and over large areas of its range, there is no longer room for the animals to roam about and adjust their densities. The situation, as pointed out by Laws (1981) in the case of the African elephant, has reversed in Sri Lanka too from one in which "human islands existed in a sea of elephants, to a sea of people with elephant islands". The problem is further compounded by development programmes that have squeezed the elephants out of their former ranges and pushed them into a few refugia. The concentration of elephants into protected areas has led to a build up in their densities within these areas, even though absolute population size might be decreasing throughout the Island.

Erosion of habitats also forces the elephants into agricultural areas, where they destroy crops and at times kill people and in turn are themselves killed by irate farmers who have borne the brunt of elephant depredations. The elephants have lost so much of their former habitat, that they are now forced to invade the communities that have displaced them. This is the crux of the elephant-human conflicts in Sri Lanka (de Alwis & Santiapillai, 1993). Depredation by elephants has become a way of life!

It is now becoming increasingly clear that if the long-term survival of the elephant in Sri Lanka is to be enhanced, then some sort of a accommodation must be reached between man and elephant. Both have to live together by mutual adjustment. Furthermore, for elephant conservation to succeed, it should have the support of the local people. The local communities that bear the brunt of elephant depredations must be properly compensated for their losses. They must also be given the opportunity to participate fully in decisions affecting their land and resources.