

AN ETHNO-ZOOLOGICAL STUDY OF
DOMESTICATED ELEPHANTS
IN
SRI LANKA



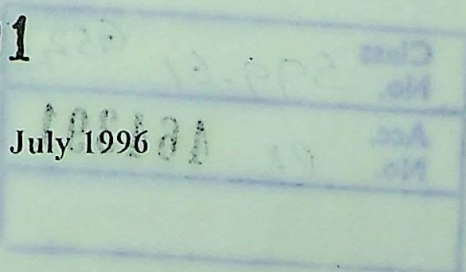
WASANTHA KUMARI GODAGAMA

(Wasantha Kumari Godagama)



This thesis submitted in partial fulfilment of the requirements for the degree of MASTER
OF PHILOSOPHY of the UNIVERSITY OF COLOMBO SRI LANKA

464391



ABSTRACT

The Sri Lankan elephant *Elephas maximus maximus* is an endangered species. The number in the wild is continuing to decline. Survival and propagation of elephants greatly depend on its domesticated population. Thus it becomes increasingly important to improve the husbandry of domesticated elephants.

The objectives of this study were to gather information on the aspects of ownership of elephants; to collect information about mahouts; to examine the maintenance cost of elephants; and to characterise the age distribution, physical characters, body condition, injuries, work load, diet and medical treatment of domestic elephants.

The data were collected on 140 elephants, 137 mahouts and 82 owners. Questionnaires and interviews were used to obtain the required information about elephants, mahouts, and owners. The physical characteristics and injuries were observed. Body condition of elephants were assessed using a ranking method. Shoulder height, neck girth, chest girth and eye to ear measurements were taken.

The majority of the domesticated elephants in this study were found in Colombo district; 72 (51%) males and 68(49%) females. The mean age of males was 34.2 ± 2 and that of females was 40.8 ± 1.8 years. The domestic elephant population consisted predominantly of adults. The proportions of the adults, sub adults and juveniles were 88%, 9%, 3% respectively, and no infants were found.

Out of the elephants, 8% were tuskers, 61% had tushes, and 31% lacked both. The presence of tushes was significantly higher in males than females. The spinal conformation of elephants varied significantly among elephants. The majority of elephants had complete tails (78%) with only one type of tail bristle, 18 toe nails (95%) and light brown coloured eyes (52%).

The mean shoulder height, neck girth, and chest girth of elephants was 234 ± 0.26 cm, 230 ± 3.1 cm and 336.3 ± 3.7 cm respectively. All these measurements were significantly higher in males than females. The asymptotic height for males was 255 cm while that of females was 231 cm.

The majority of elephants were employed for work and the mean working hours per day and days per month was 4.4 ± 0.04 and 13 ± 0.55 respectively. The diet of elephants mainly consisted of kitul, coconut and jak. However, they were fed on other plant species as well depending on the availability. Most of the mahouts and owners prefer traditional medicine to western medicine in treatment of illnesses.

The mean number of abscesses, punctures, wounds, split nails, and ulcerated foot present on an elephant was 0.3 ± 0.05 , 4.6 ± 0.45 , 3 ± 0.42 , 1 ± 0.17 and 2 ± 0.12 respectively and 27% of the elephants had eye defects. All elephants studied had at least one of the above injuries. Body condition of elephants was found to be average (index between 6 - 10).

The total annual maintenance cost of elephants was Rs.65,616 \pm 3,497, and this was significantly less when elephants were maintained by mahouts (Rs. 31,303 \pm 2,043) than owners (Rs.83,063 \pm 3353). The majority of elephant owners gained no income by keeping elephants.

A large proportion of the elephants had been purchased and were owned by private individuals including temples and dewales. Most of the owners were from Colombo District. All were Sinhalese, Buddhist and the majority were males. The mean age of owners was 51.4 ± 1.3 years. The mean number of elephants owned was 2 ± 0.22 .

All mahouts were males and Sinhalese Buddhists except one Tamil. Their mean age was 38.4 ± 1.1 . They have started work as golayas (apprentices) at the mean age of 17.5 ± 0.47 and become mahouts at the mean age of 21 ± 0.47 after the 3.5 ± 0.21 years of apprenticeship period. The mean period of working was 16.5 ± 1.1 years. The mean number of elephants cared was 7 ± 0.34 .