

EVALUATION OF BODY CONDITION OF SEMI-WILD CAPTIVE SRI LANKAN ELEPHANTS (*ELEPHAS MAXIMUS MAXIMUS*) IN RELATION TO LACTATION AND MUSTH

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Abstract

The study was carried out in 86 semi-wild captive elephants (38 males and 48 females) ranging in age from 1 to 70 years, at the Elephant Orphanage Pinnawala (EOP). The Body Condition Score (BCS) was assessed from six body regions on a scale from 1-11 as described by Wemmer et al (2006). Ages were obtained from the records at EOP and the weight was measured in 25 animals using a weighbridge. Colour photographs were taken to assist BCS determination. The data were grouped by three age classes: <10 years (calves and juveniles), 10-40 years (sub-adults and prime adults) and >40years (senior adults). Comparisons were done using the Mann Whitney U test and the Pearson correlation on gender and weight, between males that did and did not come into musth, and between lactating and non-lactating females.

The overall mean BCS of the elephant herd was 8.49 ± 0.23 (range 3.5-11) and the mean BCS for the three age classes was 8.88 ± 0.28 (n=33), 8.19 ± 0.34 (n=47) and 8.75 ± 1.22 (n=6), respectively. The overall mean BCS of the males was 9.17 ± 0.32 and that of the females was 7.96 ± 0.31 , the difference being statistically significant ($p=0.008$). The mean BCS of the three age classes of males was 8.80 ± 0.41 , 9.64 ± 0.54 and 9.38 ± 1.14 , and that of the three age classes of females was 9.00 ± 0.32 , 7.58 ± 0.38 and 7.50 ± 3.50 , respectively. The mean BCS was 9.96 ± 0.38 (n=14) in adult males that did come in to musth and 8.25 ± 1.66 (n=4) in those that did not come in to musth, the difference being statistically not significant ($p=0.32$). The mean BCS was 6.94 ± 0.37 (n=24) in females that were in lactation and 8.96 ± 0.80 (n=11) in those that were not lactating, with significant statistical difference between them ($p=0.03$ value). No significant statistical correlation was found between calving and the BCS ($r=0.91$, $p=0.09$, $n=4$).

The overall mean body weight of the three age classes was 1301 ± 160 kg (n=5), 2665 ± 246 kg (n=15) and 3709 ± 716 kg (n=5), respectively, with the mean weights for males being 1262 ± 274 kg, 3287 ± 380 kg and 4835 ± 343 kg, respectively, and that for females being 1360 ± 155 kg, 2121 ± 164 kg and 2020 ± 130 kg, respectively. No significant correlation was found between the BCS and body weight of animals over 10 years of age in females ($r=0.35$, $p=0.32$, $n=10$) as well as in males ($r=0.37$, $p=0.29$, $n=10$). The mean body weight was 4099 ± 320 kg (n=8) in adult males that did come in to musth and 2361 ± 789 kg (n=2) in those that did not come in to musth, the difference being statistically not significant ($p=0.09$). The mean body weight was 2169 ± 171 kg (n=6) in females that were in lactation and 1999 ± 226 kg (n=4) in those that were not lactating, with no significant statistical difference between them ($p=0.75$ value).

The results indicate that the body condition of elephants at EOP was maintained at appropriate levels for good health and reproductive performance.