THYROID HORMONE LEVELS OF DOMESTICATED ELEPHANTS IN SRI LANKA (*ELEPHAS MAXIMUS MAXIMUS*)

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Blood samples were collected from the ear vein into 10 ml syringes, from 24 apparently healthy elephants (10 males and 14 females), during the period of January 2001-January 2002. All were working adult animals above 25 years of age. The samples were transported to the laboratory on ice within a period of 24 hrs after sampling. At the laboratory, serum was separated, labeled and stored until processed and analyzed. The commercial kit supplied by NETRIA (UK) was used to measure T3, T4 and free T4 concentrations using Radio Immuno Assay (RIA).

The concentrations of T3, T4 and free T4 (mean ± standard deviation) in male elephants were 1.8 (±0.8), 89.4 (±24) and 8.4 (±2) nmol/l respectively, while that of females were 1.8 (±0.9), 106.9 (±23.8) and 1.8±9 nmol/l. respectively. There was no significant difference between the males and the females in their T3, T4 or free T4 levels. The values of the T3 and T4 in this study appear to be less than those reported from Thailand. It would be worthwhile to study these differences in elephants from Thailand and Sri Lanka with respect to their diet composition, age, genetic make up, work load and other stress factors. The male domesticated elephants tend to have relatively lower thyroid hormone levels and relatively higher cholesterol levels compared to domesticated female elephants. Better knowledge on thyroid hormone levels and their correlation with cholesterol levels, may improve clinical diagnosis, especially skin conditions in elephants.