

FOOD PREFERENCES, FEEDING HABITS AND GROWTH RATES OF PARKERS BLACK TURTLE (*MELANOCHELYS TRIJUGA PARKERI*), BLACK TURTLE (*MELANOCHELYS TRIJUGA THERMALIS*), FLAP SHELL TURTLE (*LISSEMYS PUNCTATA*) AND SRI LANKAN STAR TORTOISE (*GEOCHELONE ELEGANS*) KEPT IN CAPTIVITY

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Most land-based tortoises are herbivores, although some omnivorous species are in the family of Testudinidae. The current study investigated food preferences, feeding habits and growth rates of four Sri Lankan *Testudine* species including parker's black turtle (*Melanochelys trijuga parkeri*), black turtle (*Melanochelys trijuga thermalis*), flap shell turtle (*Lissemys punctata*) and Sri Lankan star tortoise (*Geochelone elegans*). Adult tortoises, four from each group were kept in cement cylinders of 4 feet diameter with unlimited access to food and water, for 7 weeks. In a different study, 64 healthy tortoises from four different species were used to measure the growth rate over one year period. Hunter's index ($H_i = p_i/q_i$) was used to distinguish preferred ($H_i > 1$) from avoided ($H_i < 1$) food categories. Parker's black turtle and black turtle preferred mostly animal origin foods; meat and fish. Flap shell turtle preferred animal origin food with special preference towards fish. Contrarily, Sri Lankan star tortoise consumed only plant materials showing an obligatory herbivore feeding pattern. Parkers's black turtle, black turtle and flap shell turtles did not avoid food which was kept for rotting up to 24 hrs. However, putrefied food (rotten for more than 2-3 days) was completely avoided by these three species. Mainly a diurnal & intermittent feeding behaviour was shown by Sri Lankan star tortoises while other three species consumed food both during day and night depending on the availability & the necessity. In the growth rate study; Black turtle, Parker's black turtle and star tortoise showed a positive growth of 168.4 g/year, 113.7 g/year and 130.5 g/year, respectively. Interestingly, the flap shell turtle showed a negative growth rate of 93.4 g/year, presumably due to unfavourable conditions of captivity.

Keywords: Captivity, Feeding behaviour, Food preference, Growth rate, Tortoises