

Ranging behavior of elephants in the northwestern region of Sri Lanka

A number of studies have focused on the ranging behavior of Sri Lankan elephants that inhabit protected areas. Yet a substantial proportion of the wild elephants occupy habitats outside protected areas. Thus the objective of this study was to determine the ranging behavior of elephants that range outside protected areas and to evaluate the impact of man on the ranging behavior of these elephants.

Radio collars were attached to nine elephants and their movement patterns were observed using radio telemetry technique over a period of two years. The size of the home range of elephants varied from 48.3km² to 183.6 km². The elephants that inhabit low human use areas had smaller home ranges (48.3 km² to 53.6 km²) compared to elephants inhabiting high to very high human use areas (50.4 km² to 183.6 km²). However, habitat availability within the home range of these elephants were relatively the same (30 km² to 45 km²). No major differences were observed between first and second year home ranges for any of the elephants studied. Similarly, no distinct differences could be observed between the ranging patterns of non-musth males (53.6 km² to 183.6 km²) and female elephants (48.3 km² to 157.9 km²) Furthermore, no distinct differences were observed between wet and dry season ranging patterns of either male or female elephants. Therefore, it can be concluded that habitat availability is the main factor that determines the size of the home range of elephants that range outside protected areas.