LOGY OF SRI LANKAN BATS

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Abstract

Although bats represent the largest order of mammals in terms of the number of species, they are one of the least studied in Sri Lanka. The Department of Zoology of the University of Colombo undertook pioneering investigations on the ecology and biology of Sri Lankan bats, which included studies on their distribution, population dynamics, roost characteristics, breeding patterns, diet, social behaviour and parasitological studies. Our results show that the status of bats has considerably changed during the last few decades. In general the numbers of fruit bats (Megachiroptera) has increased, whilst some species of insectivorous bats (Microchiroptera) have become rare. Some of the species recorded in previous studies were not recorded in our survey, which was extended over a period of 5 years. We have identified and described five main types of day roosts of Sri Lankan bats (tree tops, foliage including tents, caves, buildings and crevices). Some species show the generalized roosting pattern where as some have strict affinity a particular kind of roost. During the course of our investigations we recorded maternity roosts of several species, details of which were hitherto unknown. Our observations show that Wavul-pena cave is occupied by six species of bats making it probably the largest sympatric roost of bats in the world. By banding bats we have shown that bats from other caves (Wavulgalge) migrate to this cave, most probably because of its unique microclimatic conditions. Breeding patterns of Sri Lankan bats were poorly documented and our studies show that the majority of Sri Lankan bat species have well defined annual cycle of reproduction, which may either take place between March – April or September – December. Further, breeding periods of bats were closely associated with the rainfall. Our investigations on the diet of carnivorous bats in Sri Lanka revealed that they feed on vertebrates from all classes. Early studies on chiropteran Parasitology at the turn of the century in Sri Lanka were limited to taxonomic descriptions of bat ecto parasites. An island-wide ecto-parasitic survey including parasite ecology, was initiated in 1995 and is ongoing. The number of bat ecto parasites recorded from Sri Lanka currently stands at 27 genera representing 45 species that embody all major bat ecto-parasitic groups. Our studies show that neonatal mortality is higher in species which form large nursery roosts. We also recorded the cannibalistic behaviour of the Indian false vampire bat, *Megaderma lyra* a phenomenon which was not observed in any species of bats in the world. Bat roosts serve as potential hunting sites for many avain, reptile and mammalian predators. Regrettably, man appeared to be the most vicious predator of bats, at times accounting for the loss of bat colonies in several locations. In addition, indirect activities of man may also be the reason for the decline of bat population in Sri Lanka. In conclusion, our work has contributed significantly to the understanding of the Biology of Sri Lankan bats. We have collected base line data for bats in several fields and some of these were first time records for Sri Lankan bat species.

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