THE PATTERN OF REPRODUCTION OF SOME CAVE DWELLING BATS IN WAVUL GALGE, A NATURAL CAVE IN UVA PROVINCE OF SRI LANKA

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Observations were made approximately for three years, from October 1986 to June 1989 on five species of cave dwelling bats namely, Rousettus seminudus, (megachiroptera): Miniopterus schreibersi, Rhinolophus rouxi, Hipposideros speoris and Hipposideros lankadiva (microchiroptera) living sympatrically in Wavul Galge, a natural cave in Wellawaya, to determine the fluctuation of their population sizes and reproductive patterns. Bats were caught with a hand net as they emerged from the cave in large numbers.

The results indicate that for a given year, the sizes of the colonies of the bat species remained more or less constant. However, the changes occur during the periods of reproduction mainly from April to July for R. seminudus, July to September for M. schreibersi; September to November for R. rouxi and H. speoris and February to April for H.lankadiva. The reproductive peaks were found to be from March to May and September to November, except for M.schreibersi. With the beginning of these reproductive periods pregnant females of respective species invade the cave causing a 4 - 5 fold increase of their numbers. The birth of young bats is then synchronized to time spans of approximately 4 weeks. The offspring stay for 5 - 7 weeks inside the cave and are nursed by their mother until they become volant and leave the cave to catch insects on the wing.

These observations on reproductive behaviour of bats in the cave were accompanied with the recording of environmental factors both inside and outside of the cave. It was observed that the temperature (26°C - 29°C) and humidity (70% - 90%) were more or less constant in the cave while these factors fluctuated markedly outside (temperature; 15°C, - 40°C, humidity; 45%-100%). Good correlation was found between the prominent peaks of reproduction (March - May and September - November) and the periods of increasing rainfall.