

The Ecology of Top End Microbats



What is the project about?

Microbats are the smaller cousins of the larger megabats, commonly known as flying foxes. The Top End of the Northern Territory supports a rich and unique microchiropteran (microbat) fauna: 28 of Australia's 65 species. Two of these species are regarded as rare or endangered (*Saccolaimus saccolaimus* and *Hipposideros diadema*) and one species is only found in the Top End (*Taphozous kapalgensis*). Despite the richness in the NT very little is known about this species and unlike the fruit bats that are important for seed dispersal and pollination, the role of microbats in the ecosystem is unclear. It is thought that they may play an important role in the regulation of insect populations.

Research

Biodiversity Conservation is currently conducting the first comprehensive ecological assessment of any tropical mammal group at a regional scale that will include all microbat species. It aims to describe the habitat relationships of microbats at both the community and species levels, by analysing activity patterns and diet.

A multi-scale approach will be used to assess factors at both the landscape (from GIS) and local (field data) scales.

Intensive bat surveys will be conducted in a variety of habitats at several locations across the Top End using a variety of trapping and electronic detection techniques to find out what bat species occur. Bat calls are made at a frequency that is too high for the human ear to hear, they are also nocturnal, making them difficult to study. The ANABAT detector is a device that converts these very high calls of bats flying up to 100 metres away to a frequency that can be heard by the human ear, so a species can be identified.

Environmental information and habitat characteristics will also be measured and recorded as well as information for roosting and foraging (insect) availability. Finally, broader scale information such as topography, temperature, rainfall, distance to available water, geology, soils, will be derived from GIS for each sampling area. All of this information will be fed into statistical software package to build up a picture of the species compositions and habitat associations for each species of bat.

Where the bats live and what they eat can help researchers interpret how the bats use their habitat and their ecological importance. This information will provide the framework for understanding the management requirements of this group and identify some of the key priorities for the conservation management and research of microbat communities in the future.

