8
Population density and spatial requirements

A measure of abundance, usually expressed as the number of animals per unit area of habitat, is an important parameter in wildlife science. It's useful for both for comparing the carrying capacity of different types of habitat as well as estimating the total size of a population. The latter is an important piece of information because conservation agencies, such as the International Union for the Conservation of Nature, use population size as one of their main criteria when assessing conservation status.

The converse of population density is the amount of living space used by a single animal. Adequate space is a primary resource for any free-living animal. In an increasingly crowded world, this is also essential information for the conservation of tree-kangaroos because, in the final analysis, they will only survive if they have enough forest to live in.

However, this essential information it is not easily obtained for tree-kangaroos, largely because they are often so sparsely distributed. As well, they are behaviourally cryptic animals; that is, they are extremely wary and hide from those who intrude into their forest. So, if you can't see them, it's not a simple matter to work out how many there are or how much forest each one uses to move around in. One way to overcome this is to fit some sort of device that gives away their position. Usually this is a collar with a small radio-transmitter that emits a signal that can be picked up with a special receiver.