

## Fire and Mammals in the Gibson Desert - some preliminary results

Per Christensen CALM, Brain St, Manjimup WA 6258

Work on the distribution and abundance of mammals in relation to fire frequency in their habitat has been in progress in the Young Range area of the Gibson Desert since 1987.

Number and species of mammal have been shown to relate closely to major site vegetation types in the area. The highest number and diversity being found on the most fertile sites on alluvial soils associated with the base of the ranges and in the vicinity of sand dunes.

There is also a relationship between numbers and species and time since fire in the more flammable habitats. In the fire prone spinifex habitat numbers and species of small marsupials declined immediately following fire. Rodent numbers, although declining, seemed more affected by drought than by fire. One species, *Notomys alexis* increased in numbers against this trend becoming more abundant in the first and second year following fire during a period of drought.

The only medium sized native mammal still surviving in the area *Macrotis lagotis* lives primarily in habitats where fire is a very infrequent event. Populations do occur however, in flammable spinifex habitat associated with sand dunes. Observations of digging activity on dune sites where fires have partially burned their home range suggests that *Macrotis* avoids recently burned areas. These observations together with information which has been obtained as the species biology suggest that there is no special relationship with fire.

Work is continuing to further elucidate the pattern of colonization of burnt areas by small mammals in the Gibson Desert.