

FAUNA IN THE NORTHERN JARRAH
FOREST (THE MARDO'S SANCTUARY)

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Fauna investigations at Dwellingup were initiated in response to the general public's questioning of the Forests Department prescribed burning policy. There was some concern that programmed burning would have a detrimental effect on the fauna of forest areas in Western Australia.

Initial investigations began in 1971. The aim was to determine firstly the distribution and types of animals frequenting the forest, and secondly the selection of species for long-term detailed study.

Exploratory trapping was subjective in the early stages, and mainly confined to swamps and areas of dense vegetation that were found to support forest fauna. Upland areas were trapped to a lesser extent because only a few, if any, animals were caught. As a result of these early studies it was thought that prescribed burning had a minimal effect on the existence and maintenance of smaller marsupial populations.

Subsequently, long-term studies were initiated in swamps to ascertain animal movement patterns and population stability. Antechinus flavipes, a small marsupial mouse (Mardo), was selected as the most suitable species for close study due to the relative ease of capture and recapture.

Recently, a study in upland forest was established in two areas. One of the areas was subjected to regular prescribed burning, whilst the second area had had fire excluded from it for 40 years. The regularly burnt area produced the same result as did previous upland exploratory trapping. The area from which fire had been excluded, however, had population levels which were as high as those found in swamps.

The reason for the substantial population in the unburnt country is not yet clear and further studies are under way in upland forest to determine the effects of canopy cover, quantity of logging debris, stand age and density.

It is possible that the regular 5 to 7 year burning of the forest has created conditions unsuitable for the Mardo in the uplands and thus it has sought sanctuary in the dense swamps.

The swamp areas are not burnt so frequently and hence vegetation and litter are allowed to build up to what appear to be suitable habitats for the Mardo.

Since it is not practical to extend the interval between prescribed burns in upland forest, we could make a special effort to see that swamp areas are not deliberately burnt out when the prescribed burning is done. Instead, a 15 to 20 year rotational burning of swamps could be implemented on a selective basis and, since the swamp involved only makes up a small percentage of the forest area, this would cause little inconvenience to the prescribed burning programmes that are at present in operation.