

CONSERVATION PLAN IN DESERT

by Andrew A. Burbidge, Principal Research Officer

Of all the animal groups occurring in Australia, mammals have suffered most since the arrival of Europeans.

We are all familiar with the variety of reasons put forward to explain the decline of the mammals — clearing, foxes and cats, grazing by domestic stock and rabbits, fire and so on — but there are few studies available showing which factor or combination of factors has been most important, and whether the decline can be halted or revised.

About one-third of WA is arid sandy or stony desert dominated by spinifex (*Triodia* and *Plectrarchne*) grasslands.

This is the area least affected by European man and his animals and weeds — it has never been cleared or grazed by stock, nor have rabbits had any impact.

Remarkably, though, the deserts have suffered a massive decline in their once rich mammal fauna, with many species either locally or completely extinct.

In this simple environment, where few changes have taken place, a study of the causes of decline should be easier than in other parts of the State and, hopefully, it should be easier to halt or reverse the decline.

Three research programmes carried out at the Wildlife Centre have helped us come to grips with the problem.

The first was a series of biological surveys of the deserts directed by Norm McKenzie and myself between 1975 and 1979, and continued on the Nullabor Plain last year.

These surveys were the first detailed examination of the vertebrate fauna of Western Australian deserts and resulted in a good understanding of the current status of desert mammals.

Many species which had been recorded in abun-

dance by the early explorers and scientific expeditions were not found.

The second study, again by Norm McKenzie and myself, has analysed post-European changes in the status and distribution of the W.A. mammal fauna to seek patterns that might reveal causes of decline.

One interesting result of these analyses is that all species which have declined or become extinct have adult body weights between 50g and 5kg.

Within this 'critical weight range' desert mam-

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and Land Management,

us for Leon

HEALTHY

grant has been made available to the new Department with the introduction of an innovative fitness and recreation programme.

by the Commonwealth Department of Sport, and Tourism, the money will be spent on a 'needs' organization of a pilot health and fitness

ishment work and resulting reports will be carried out by advanced students from the Department of Environment and Recreation Studies (UWA) under the supervision of Glen Watkins.

ed that the programme will co-ordinate and encourage appropriate voluntary activities so that they meet the requirements of employees in differing work

Department's efforts may become the model for other organizations.



The numbat — hoping to grow with the new Department.