

CONSERVATION CORNER

The Malleefowl ***Leipoa ocellata***

Introduction

Malleefowl belong to the family Megapodiidae, which comprises 19 species in 6 genera distributed from the Philippines through Indonesia, New Guinea, the Solomons, New Hebrides, central Polynesia and Australia. While the term “megapode” means large feet, this group are also called incubator birds for their habit of laying eggs in burrows close to a heat source such as a volcano (burrow-nesters) or in mounds of decomposing organic matter (mound-builders) rather than using their own body heat to incubate their eggs. The Malleefowl is endemic to Australia and unique amongst megapodes in that it inhabits semi-arid and arid habitats rather than humid forests. As a family the megapodes are known to lay extremely large eggs and the Malleefowl is no exception. Malleefowl chicks are large (at hatching a Malleefowl chick is equal in size to an adult Stubble Quail), can fly within 24 hours and are totally independent of parental care from day 1!

Distribution

The Malleefowl has undergone a dramatic reduction in both abundance and geographic distribution in the last 100 years. Before European settlement Malleefowl were distributed in an almost continuous fashion across southern Australia from the Great Dividing Range to the Indian Ocean, but this has been replaced by fragmented remnant populations scattered through the southern mainland states. In the Northern Territory the Malleefowl existed to the southern edge of the Tanami Desert, but it is now considered extinct from this part of Australia.

Processes Threatening the Malleefowl include :

Clearing of habitat and fragmentation

Areas of mallee with fertile soil and good rainfall support thicker habitat, greater abundance of food plants and greater densities of Malleefowl but unfortunately such areas also make the best grazing areas and crop lands and have been preferentially cleared for these purposes since settlement. Thus, in agricultural areas land clearance has resulted in fragmentation of remaining

birds into a large number of small populations with limited opportunities for dispersal of birds between fragments.

Competition

It is not surprising that the highest densities of herbivores are also found in the best quality habitat, where food resources are greatest and Malleefowl densities are also maximal. The quality of the Malleefowl habitat in such areas has been severely reduced by grazing of introduced goats, sheep and rabbits.

Fire

Malleefowl require large, long-unburnt blocks of mallee to survive and breed. Large fierce fires may be directly fatal to the birds as they are poor fliers and may not be able to escape. In addition burning of large areas of habitat reduces the abundance of both food plants and leaf litter for many years, so that it may take 17 years before conditions are suitable for successful breeding to occur. In comparison small fires that burn slowly and patchily are much less devastating, with birds even using the burnt areas for foraging and the unburnt areas for shelter, roosting and nesting. Traditional burning practices by Aboriginal inhabitants would have created a mosaic of different aged patches, some with low fuel loads, which would have prevented the occurrence of larger fires, dangerous to both humans and animals.

Predation

Predation is the major cause of mortality for the Malleefowl. Predators include native raptors and introduced mammals such as the European Fox, feral cat, the Dingo, as well as humans.

Summary

Both the main cause for the decline in Malleefowl numbers and the major impediment for a recovery are: habitat. Clearance of habitat for agricultural purposes resulted in severe fragmentation of suitable habitat, which is often of lesser quality. The quality of remnant habitat has been, and continues to be, degraded by changes in the frequency and severity of fire, agricultural run-off and grazing by introduced and increased numbers of native herbivores, both encouraged by provision of more permanent water resources.

One aspect of the Malleefowl recovery Program has been captive breeding of the species, both to learn more about their behaviour and requirements and as

a source of animals for re-introduction into suitable habitat. The following article from Nicholas Bishop outlines the Adelaide Zoo's experience and successes in breeding this unique species.