Malleefowl *Leipoa ocellata*

Conservation Status: Vulnerable

Identification

Malleefowl (*Leipoa ocellata*) are large, ground-dwelling birds that rarely fly unless alarmed. They are one of three mound-building bird species in Australia, and the only one in Western Australia. They are approximately the size of a domestic chicken, with adults weighing between 1.5 and 2.5kg. They have robust, powerful legs and the wings are short, broad and rounded at the tip.

Malleefowl can be very hard to spot because they camouflage so well with their natural environment. They are characterised by the distinct grey, black and white banding across their body and wings. The breast and belly are cream-white, and their neck and head are greyish with a white stripe under the eye. A dark crest extends from the front of the crown to the nape and is raised when the bird is alarmed. Both sexes are similar in appearance; however males are slightly larger than females.

Photo: Karara Mining

Taxonomy

Family: Megapodiidae
Genus: *Leipoa*
Species: *ocellata*
Other common names: gnow, mallee hen, native pheasant, lowan, nganamara, incubator bird, thermometer bird

Distribution and Habitat

Historically, malleefowl were found in the semi-arid mallee shrublands and woodlands across southern Australia in New South Wales, Victoria, South Australia, Northern Territory and Western Australia. Though the species is still found across its range, there have been local extinctions in the NT, northern SA and far south-west WA, and its remaining populations are highly fragmented due to extensive land clearing.

In Western Australia, malleefowl continue to persist in in several nature reserves across the state including Dryandra State Forest, Fitzgerald River National Park, Stirling Range National Park, Kalbarri National Park, Mount Manning – Helena and Aurora Ranges Conservation Park, and have been reintroduced to Francois Peron National Park in Shark Bay. They are most commonly seen in reserves and private property within and around the Wheatbelt region. Recent surveys in the Goldfields have also noted that malleefowl continue to persist in this arid region.

Malleefowl are found in arid and semi-arid areas dominated by mallee eucalypts on sandy soils. They are known to also occur in Mulga (*Acacia aneura)*, Broombush (*Melaleuca uncinata*), Scrub Pine (*Callitris verrucosa*), *Eucalyptus* woodlands and coastal heathlands. Malleefowl require abundant leaf litter and a sandy substrate for the successful construction of nest mounds.

Community Involvement

If you think you have seen a malleefowl or a malleefowl mound, fill out a malleefowl report form and send it to the Department of Parks and Wildlife's Species and Communities Branch at fauna@dpaw.wa.gov.au. The Department keeps track of the distributions of threatened species to help monitor population trends and inform management decisions.

The Department runs a variety of volunteer projects across WA including scientific research, community education and manual labour. Further information about these opportunities can be found on the Department's webpage.

Biology and Behaviour

Malleefowl are typically quiet-moving and will often freeze or move quietly away when disturbed, but they are also known to burst up over trees with heavy flapping. The male malleefowl makes a deep, two-note bellowing or booming, or loud clucks. The female makes a high-pitched crowing, soft crooning or low grunting. Malleefowl are generalist feeders that have an omnivorous diet consisting of seeds, fruits, flower buds as well as invertebrates, lerps, tubers and fungi.

Birds tend to breed in the same area each year and so are generally sedentary, but radio-tracking studies have shown that over the course of a year the birds may range over one to several square kilometres. Birds do not appear to defend their home ranges despite considerable overlaps with other malleefowl.

Malleefowl pairs are generally monogamous and will pair for life once breeding begins. Breeding tends to occur once a year, with eggs laid from September until the end of summer. Malleefowl reach sexual maturity between 3 and 4 years of age. Malleefowl are considered to be long lived, with a known maximum lifespan of 28 years.

Malleefowl build distinctive nests comprised of a large mound of soil covering a central core of leaf litter that can span more than 5m in diameter and 1m in height. A malleefowl pair will often use the same nest site each breeding season rather than build a new one. Nest preparation occurs in autumn and the male will tend the nest throughout summer until temperatures begin to fall. The female helps with the nest initially but spends most of her time looking for food to meet the metabolic demands of egg production. Males do not stray far from the nest during breeding, and in the vicinity of the nest the male will act aggressively towards other malleefowl.

Clutch sizes are highly variable, ranging from 3-35 eggs with an average of approximately 15-25 eggs. The female will lay an egg in the mound every 5-7 days during the summer months. The decomposing organic matter with which the birds fill the nest incubates the eggs for approximately 60 days.

From November, chicks begin to hatch and emerge from within the mound unaided. About 80% of all eggs will hatch, provided they are not saturated by rain or predated by foxes or goannas. Chicks can often be buried up to one metre deep beneath the soil and may take up to 15 hours to emerge. They receive no parental care and within an hour of leaving the nest can run and feed independently. Chicks are capable of dispersing quite widely after emerging from the nest. However, mortality among chicks is high, with 80% of hatchlings killed by predators or dying from metabolic stress brought on by exposure or starvation within about ten days.

Conservation status

The malleefowl is recognised as a threatened species under State and Commonwealth legislation. In Western Australia the species is listed as fauna that is 'likely to become extinct' in the wild (Specially Protected) under the *Wildlife Conservation Act 1950* and has been assigned the threat status ranking of Vulnerable using International Union for Conservation of Nature (IUCN) criteria. Nationally the species is listed as Vulnerable under the Commonwealth *Environment Protection and Biodiversity Conservation Act 1999*.

There are several threats currently impacting the survival of malleefowl populations, including:

- ongoing habitat loss from vegetation clearing;
- death and injury resulting from vehicle strike and fox and feral cat predation;
- competition for food and habitat with introduced herbivores (sheep, rabbits, cattle, goats);
- habitat degradation and loss from increased fire frequency; and
- climate change.

Management

Recovery Plan

A national recovery plan (Benshemesh, 2007) has been produced for this species. Management objectives from this plan include:

- Reduce permanent habitat degradation and loss due to grazing pressure, fire regimes and land clearing.
- Reduce mortality from predation and road mortalities.
- Reduce isolation of fragmented populations.
- Promote malleefowl-friendly agricultural practices.
- Increase public awareness and education.

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Citation

Department of Parks and Wildlife. (2016). *Fauna profiles: Malleefowl Leipoa ocellata*. Retrieved from: http://www.dpaw.wa.gov.au/

Key References

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