

INTRODUCING THE MALLEEFOWL : THE MOUND-MINDER OF AUSTRALIA'S SCRUBLANDS

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At first glance, the Malleefowl *Leipoa ocellata* looks like a dowdy turkey, Australia's version of the dazzling pheasants of the orient. If you visit them at Adelaide Zoo, look closer and you will see a species that is superbly adapted to the rigours of our terrain and climate, with a talent for reproduction that is as unique as it is bizarre. Indeed, if you're looking very closely, you will see many eyes staring straight back at you – *ocellata* means 'many eyed', for the markings covering the wings, an arid-land restyling of the opulent peacock's train!

This species belongs in the order Galliformes and is related to many of our most familiar birds – King Quail *Coturnix chinensis* that scurry about your aviary set-ups are distant cousins. We regularly tuck into another one for Sunday roast - the humble chicken, the domesticated version of the Red Jungle Fowl *Gallus gallus*. Grouse, partridges, Turkeys, Guinea fowl and the delightfully weird Guans, Curassows and Chachalacas of South America are also related (del Hoyo et al, 1994).

So where does this one fit? It belongs to a family of some 22 members found only in Australia and South-east Asia, the Megapodiidae, which translates as "Big-footed"! This is very apt as these feet are put to extraordinary work throughout the life of their owner, piling sand and vegetation onto huge mounds within which the eggs are laid and left to incubate with the heat generated by the sun, soil and decomposing organic matter. The generic name of the Malleefowl, *Leipoa*, means "to leave the eggs".

Accommodating this method has exacting demands for their captive management. Adelaide and Monarto Zoo's Malleefowl programme has contributed meaningfully to the recovery efforts for the species with numbers of young produced over the last 15 years. One of the key factors in successful husbandry of these birds is siting their accommodation appropriately; a mound requires abundant sunshine- and plenty of room. A fully functioning mound may be 3 – 5 metres in diameter and a metre high with as much as a cubic metre of moist leaf mulch within (Benshemesh, 2000). Zoo staff must

supply the necessary material – no mean feat with multiple trips with the wheelbarrow to provision an aviary with the several tonnes of matter required.

This monstrous incubator is constructed from autumn to early spring by both birds but the pair separates after this point. Feeding becomes the female's full time occupation in order to produce 15 – 25 large eggs furnished with massive yolks for the long development of the chick. She deposits these at 5-7 day intervals starting in early September, winding up in mid to late summer (Benshemesh, 2000). The male's job is to continually adjust the amount of material to maintain an optimal incubation temperature of c. 33 degrees Celsius (Pizzey, 1997), which he tests for with a special apparatus in the beak. He'll then set to work with those hefty feet, removing or applying exactly the right amount of sand to do the job. It's a long haul with eggs taking up to 60 days to hatch, after which the chick emerges inside the mound and struggles through 50 cm of mulch to the top (del Hoyo, et al 1994). However, it's fully feathered, able to fly and requires no parental assistance, making it the most super-precocial chick in the world! That's the benefit of a big, nourishing yolk and a long incubation period.

It's this independence that assists the rearing of the chicks. They must be kept warm and provided with a diet sufficiently high in calcium, fat, protein and carbohydrates at the correct phases of development. A bowl of adult Malleefowl food may feature a good quality blended pigeon mix, turkey pellets, lettuce, silver-beet, meat and egg based mixes. A sprinkling of mealworms is a welcome treat.

There are only two other Megapode species in Australia, the Brush Turkey *Alectura lathami* and the Orange-footed Scrubfowl *Megapodius reinwardt*. Both use different versions of the mound incubation model and are a fascinating aspect of our avifauna.

Careful conservation management of the captive population of Malleefowl is centred on Western Plains Zoo, Dubbo, with 16 pairs (Benshemesh 2000). Adelaide Zoo bred stock are available to augment the programme if the need arises, with our current pair enjoying well-earned retirement on exhibit. The programme continues to reveal much about this enigmatic dynamo of the dry woodlands and points the way to an effectively managed future supported by a sound avicultural component.

References

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