

Observations on Swampheens Breeding near Manjimup, W.A.

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Observations of a breeding pair of Swampheens, *Porphyrio porphyrio*, breeding near Manjimup, 480 km south of Perth, during 1976/77 are presented. After hatching the male constructs a nursery nest (Ridpath 1971) in a tussock of grass or amongst some reeds in a situation more easily accessible to the chicks where they can be brooded at night or at times during the day. Two or three of these nursery nests may be built at different sites within the territory, perhaps, to lessen the risk of predation.

Our home overlooks a small irrigation dam which, in fact, is low-lying ground flooded in spring and drained in autumn. The edge of the dam supports a good growth of swamp vegetation: reedmace, swordgrass, sedge and rushes, which is the habitat of a number of swampheens.

The irregular shoreline of the dam is divided into five territories, which are strongly defended during the breeding season and to a lesser extent for the rest of the year. The territory of the dominant pair is the largest and extends into our garden. This territory is very strongly defended, although during the winter months another pair is permitted to feed in the poorest section of the garden. The dominant pair nested in the only patch of reedmace; other swampheens nested in either swordgrass or rushes.

The nest was made by bending over the reedmace to form a platform approximately 20 cm thick, with a shallow saucer-shaped depression in the centre sparsely lined with grasses, approximately 20 cm diameter by 4 cm deep at the commencement of incubation, increasing to 10 cm at hatching.

During September 1976 the female was found incubating four eggs and on 9 October two chicks hatched. One egg had been taken, probably by a rat judging by excreta found near the empty shell, and the other was infertile. On 11 October, at 17:00 hours, the male and female were observed constructing a nursery nest in a clump of rushes growing in about one metre of water.

On completion of this nest the female brought the two chicks from the reedmace for brooding. In the meantime the male went off, returning about half an hour later with food for the chicks. On the next two nights, at 17:30 hours and 17:00 hours respectively, the female and chicks again went to this nursery nest.

So that the birds could be photographed a hide had been erected near the nursery nest on 12 October, and after allowing two days for the birds to become accustomed to it, it was occupied on 14 October at 16:00 hours. By 16:30 hours the birds were feeding in the vicinity, but, after 30 minutes, the female and chicks had made no approach to the nest and the male was not in sight. However, investigation from the back of the hide revealed the male building a new nest about five metres from the one under observation. When he finished the nest he called and one chick attempted to reach him, but returned to the female when about halfway across an open patch of water about one metre wide; the female then escorted both chicks to the new nest. By 20 October one of the chicks had disappeared.

On 1 December a newly built nursery nest was located, and on 4 December, at 08:30 hours, the adult pair of Swampheens with four chicks and the juvenile from the previous brood were observed feeding around it. This nest had already been used and continued to be so until a second was constructed, but unfortunately it was impossible to closely observe either of these nests without disturbing the birds. On 31 December, at 16:00 hours, the male swampheens was observed

building on the nest of a Coot *Fulica atra* situated on a low stump at the edge of the dam about 50 metres from the house from which excellent observations could be made. The Coots were still using the nest at night to brood their four month-old chicks and strongly resisted the usurpation with flapping of wings and splashing of water, all accompanied by a great deal of vocal noise. For no apparent reason a Musk Duck *Biziura lobata* joined in the fracas. Once or twice the swampheens stopped work and made a stab at them with his beak, but in a quarter of an hour the nest was to his satisfaction, and as the Coots and Musk Duck had retired, he commenced feeding. By 19:15 hours all the family were feeding and gradually working nearer to the nest. Each adult had one chick in close company with it, which continually begged for food by jumping up and down and at the same time flapping its under-developed wings. The other two chicks were feeding independently, but sometimes they would approach one of the adults for food. However, on each occasion they were chased off. The juvenile was seen to feed the rejected pair with portions of frog.

At 19:30 hours one of the independent chicks climbed into the new nest, but left almost immediately. Five minutes later the female led the chick, which had been accompanying her, into the nest where she arranged and rearranged the nest material. The chick which had been accompanying the male ran to the nest and climbed in without hesitation. At 19:45 hours one of the independent chicks came to the nest, but before entering stopped and extended its head to the female on the nest, who reciprocated the action, touching the chick's beak. The chick then entered the nest. These actions were repeated a few minutes later when the last chick came to the nest. Finally the juvenile squeezed in as much of itself as it could. At 20:10 hours the male approached the nest, stopped about two metres from it and called loudly before moving quickly away to the far side of the territory.

On subsequent evenings the foregoing actions were repeated, except that we did not see the juvenile enter the nest again. By 13 January the four chicks were roosting in the lower branches of some trees standing in about 30 cm of water and the juvenile flew to the higher branches. On 28 January the whole family was still feeding in the territory.

None of the birds was banded and it was thus not possible to determine, as the chicks grew older, which were following the adults and which were feeding independently, as there were no observable differences between them. Next season we hope to learn more by having the birds on this dam banded.

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Reference

Kidpath, M. G. (1972), 'The Tasmanian Native Hen *Tribonyx mortierii*. I. Patterns of Behaviour', *CSIRO Wildl. Res.* 17: 1-51.

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Wing-tagging of Parrots

Numbers of Adelaide Rosellas, Eastern Rosellas, Rainbow Lorikeets and Musk Lorikeets have been marked recently with patagial wing-tags in the Mount Lofty Ranges of South Australia.

Birds were marked with a bi-coloured tag on each wing, the size of the tag varying according to the species. The tags are also numbered to facilitate individual identification if birds are re-trapped or recovered.

Details of sightings or recoveries will be appreciated and may be reported to the project leader.

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