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Some Observations on the Breeding Habits of the Little Penguin

By E. W. HURSTHOUSE, Wellington, N.Z.

By a fortunate train of circumstances I have been afforded the opportunity of daily observing the habits and peculiarities of the Little Penguins (*Eudyptula minor*) in rearing their young. These records are taken from the day the first egg was laid until the day on which the young birds left.

The period of incubation was 38 days from August 4 to September 10 inclusive—see summary at end. The sitting was taken alternately by the birds. The first continuous sitting was, apparently, for eighteen days, although it may have been only five, as one of the birds returned in the evening of the fifth day and remained for some hours. As the birds had not been marked, I cannot be certain if they changed, although I am inclined to believe they did not do so, as, upon a close look, I decided that the female was still there. On all later occasions when they changed over, which was done as soon as the other bird returned, the sitting bird left almost immediately.

It was not possible to ring the birds as the size of ring required was not procurable, so to overcome this difficulty I marked the female with a heavy dab of white enamel on the back of the neck. The device was very successful as, even after continual immersion in the sea, it could be traced up to the last.

The next sitter was on the eggs for twelve days, but after that the changes were more frequent, being five days, one day, two days, and then the chicks were hatched. During the long periods of incubating no food was taken by the sitting bird.

The chicks, which were of a dark dull-brown colour, hatched about 8 a.m. on September 10. They were quite small and for several days could not be seen without one's

lifting the sitting bird. On the evening that they were hatched the other bird returned to take charge, and from then onwards the parents changed every night for 19 days, when both were absent for one night. Such an absence occurred twice. From that time until the chicks left, they were alone all day, and apparently it was necessary for both birds to be away in order to procure sufficient food.

After several unsuccessful attempts (by the aid of an electric torch) to witness the feeding, I arranged an electric light in the shelter, built for the birds in the first instance, then by using a reflector some feet away I was able, unobserved, to keep watch, and was eventually rewarded.

The method of feeding is interesting, and on the part of the chicks is a pretty action, inasmuch as each chick, prior to receiving food, plays around the head and bill of the feeding bird for some moments until that bird opens its bill. The chick then puts its head completely inside, and with a number of movements of the feeding bird the food is produced and the chick withdraws. This is repeated several times for each chick. At a later date, when the chicks were six weeks old, I was able, at close quarters, to see both parents feeding, and although the chicks were too large to get their heads in, the feeding was otherwise precisely the same as when they were quite young. They were fed regularly, with two exceptions, up to the evening before they left.

The first signs of moulting the down was noticed on the thirty-eighth day. Down was coming off at the tail and the body under the flippers. The last to disappear was on the back of the neck and the upper side of the flippers. The number of days to the moulting stage was the same as the number for hatching. That is probably a coincidence only. Another interesting point is that the first chick to leave (probably from the first egg laid) left on November 4, exactly three calendar months from the date of hatching.

The chicks sleep with their heads completely tucked under the breast. I was not able to see what happens when they were a few weeks older as I could not then catch them asleep.

During the first three or four weeks when the parents changed, it was done as soon as the incoming bird arrived, the sitting bird leaving almost immediately. Later they would remain until the early hours of the morning. When the chicks were half-grown the feeding problem became a serious one and as time went on the parents showed this by their emaciated bodies. The full-grown chick appeared larger than the parent. Beyond the squeaking of the chicks when the feeding bird arrived there was no sound, although during the sitting period there was always a caress by crossing bills, and a few notes of their characteristic "song" when the incoming bird arrived.

I had expected that the adult birds would have taken the chicks to the water some thirty feet away, but that was not so, I believe, in this case, because at 10.30 p.m. on November 3 the adult birds had not returned and I noticed one of the chicks at the entrance of the shelter. Next morning at 7 o'clock the chick had gone. Precisely the same procedure was followed by the other and although I watched until 12.30 a.m., hoping to see it depart, I missed it, and it had gone by 6 a.m. As far as I am aware these chicks had never previously left the shelter, yet they were able to find their way to the sea either by following the water channel by the road and down a drain-pipe, or crossing the road and taking the risk of traffic, yet I am sure they found the sea safely.

This has been an interesting study and one which I hope can be repeated next year, when better facilities for study will be introduced.

The following is a brief summary of dates and events:—

- 1938
August 3—Adult birds adopted the shelter.
" 4—First egg seen in the morning.
" 9—Male bird returned at 7.30 p.m., and there at 10 p.m. I believe it did not replace the sitting bird. Dates of changes show that the female hatched the eggs. The female sat between August 4 and August 22.
" 22—Birds changed over about midnight, the male replacing the female. The male bird sat until Sept. 2.
Sept. 2—Change-over at 7 p.m.
" 7—Change-over at 9.15 p.m.
" 8—Change-over at 7.15 p.m.
" 10—Chicks hatched before 8 p.m. Quite small and appeared very weak. At 9.40 birds changed over.
" 11—Birds changed at 9.50 p.m.
" 12-22—Birds changed regularly between 7 p.m. and 7.30 p.m.
" 23—First witnessed the method of feeding.
" 24—Birds changed at 8 a.m.
" 25—Birds did not return.
" 26-27—Birds changed at 8.25 p.m.
" 28—Both birds at rest with the chicks.
" 29—Birds did not return.
" 30—Birds returned at 8.30 p.m.
Oct. 1—From this time onwards chicks left alone all day, parents returning during the evening to feed.
" 17—Noticed first signs of moulting.
" 28—Most of the down now moulted.
Nov. 1—Only little down left on back of flippers.
" 3—Adult birds did not return. The male chick left some time between 10.30 p.m. and dawn.
" 4—Female chick in shelter all day and suspecting she would leave I kept watch till 12.30 a.m. on November 5. Had gone at 6 a.m.

Mr. Peter Scott, of East Lighthouse, Sutton Bridge, Holbeach, England, is preparing a monograph to deal with all the Geese and Swans in the world, and hopes to include the best photographs which have been taken of such birds, some eight hundred in all. Will any members able to and desirous of helping Mr. Scott communicate with him direct.