

NOTES ON BREEDING THE AUSTRALIAN  
BLACK SWAN IN BANGKOK

by

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From the information presently available to me, it appears that the Australian Black Swan (*Chenopsis atrata*) has not previously been bred and raised successfully in Bangkok. The following note was prepared in the hope that the information and observations herein will be of assistance to the many skilled and enthusiastic aviculturists of Thailand. The author would welcome notes on the experience of other bird fanciers with this species.

Three fine adult Black Swans were added to my collection in Wireless Road in June, 1963. After a few weeks, war was declared between the two males and the less belligerent was segregated. The selected pair were housed in a large flight aviary 12 metres by 6 metres by 3 metres high, well grassed and covering a 1 metre deep pond 5 metres  $\times$  5 metres.

Early in September 1963, both birds began gathering nesting material, grass, leaves and twigs, and a clutch of 5 eggs was laid by 20th September. Due to my absence from Bangkok, individual egg dates were not noted. Unfortunately, on 22nd September, the male bird became ill and died on 25th September, apparently from Leucocytozoois (see Appendix). The female deserted the eggs which were, through the courtesy of the Poultry Division, Kasetsart University, placed in an incubator. However, since there had been, due to the death of the male, appreciable gaps in the brooding, the eggs failed to hatch although subsequently it was found that three had been fertile.

After a few days, the female Swan was transferred to a larger flight aviary including a very large pond and joined the other male.

In May, 1965, attempted mating was observed, the male became very fierce and spent much time driving and attacking a number of wild ducks in the aviary. The pair of Swans was then transferred to a large open pen with access to a pond 25 metres long, 5 metres wide

and 1 1/2 metres deep, and a large grassy area. The pond contained a heavy growth of aquatic plants including *Myriophyllum*, *Ceratophyllum*, *Chara* and *Lemna* and a rich invertebrate fauna.

Food given twice daily consisted of a mixture of padi rice, 9 parts; whole corn meal, 1 part; small green peas, 1 part; pea meal, 1 part; always in excess of the immediate requirements. Within a few days of the move, nest building commenced and an ample supply of dry grass, straw and "woodwool" was provided.

The first egg was laid on 7th June and the clutch of four completed on 16th June (see Table).

Unfortunately, the male was "in moult" and no eggs were fertile. The eggs, all rotten, were removed at the 42nd day.

During the brooding period, both birds continued to add material to the nest, pulling grass and leaves from the edge and thrusting them under the eggs, which were also rotated several times a day. Both male and female brooded, changing over every 3-4 hours day and night. This procedure was adopted for all four nests described in this paper.

Additional masses of nesting material were provided every day, or as often as it was noticed that the previous supply had been incorporated in the nest.

The following table lists the egg laying and hatching dates. It should be noted however that the reference numbers for the cygnets do not necessarily coincide with the egg numbers. In order to ensure minimum disturbance of the parents, no attempt was made to mark or label the eggs.

Hatching is a prolonged operation, on two occasions it was possible to observe this closely--in the 4th clutch, thanks to the particularly convenient location of the nest close to the boundary fence of the pen. On two occasions the first chipping was seen and from then to the complete emergence of the nestling occupied approximately 8-10 hours.

In the Table, the column "Hatched" refers to the time when the chick was completely free from the shell, although with the down still wet. From hatching to complete dryness occupied about 6 hours.

It has been noted above that the eggs were regularly moved and turned during brooding. Thanks to the convenient position of the fourth nest an extremely interesting observation was made.

During the brooding period the parents remained relatively quiet, only uttering soft "communication" calls occasionally, except of course when they considered that danger threatened, when they adopted an aggressive attitude and uttered the typical hissing scream. However, about 48 hours before the first egg hatched, a soft "mew" note was uttered each time the eggs were turned. This note is closely similar, though much softer than the ordinary regular "communication" note, and was uttered only when the head and beak were actually engaged in moving the eggs.

From the observations made and experience gained during the past three years, a few significant generalizations emerge.

1. Ample space, and an adequate supply of good clean water are needed.
2. Vegetable material as food, grass, aquatic plants of the softer varieties, together with a balanced cereal supplement should be provided, slightly in excess of immediate requirements.
3. Interference with parent birds, nest, eggs and cygnets *must be avoided* except in dire emergencies, at least until the cygnets are 2-3 months old, by which time they are capable of looking after themselves. (Note: Until the age of 2 months, the cygnets depend almost completely on their parents to locate food supplies and, when necessary, e.g. deeply rooted aquatic plants, to bring the food within their reach.
4. Access to ample supplies of good water is essential during the period when the cygnets commence moulting their down and acquiring their first plumage.
5. During the brooding and early rearing period the parent birds are extremely aggressive. Interference is to be avoided in order that the parents, attacking what they consider a source of danger will not accidentally trample and so injure or kill the young birds.

TABLE  
*Chenopsis atrata*. Egg laying and Hatching Dates  
 1965-1966.

Clutch No.	Egg laid	No.	Cygnets Hatched
1	1 7 June '65 a.m.		Eggs infertile.
	2 10 June p.m.		
	3 12 June p.m.		
	4 14 June a.m.		
	5 16 June ?		
2	1 12 August '65 ?	1	25 September '65*
	2 14 August ?	2	26 September (died 3 Oct.)
	3 15 August p.m.	3	26 September (died Wet 26th Sept.)
	4 17 August a.m.		
	5 19 August a.m.		
	6 20 August p.m.		
3	1 21 November '65 ?	1	5 January '66 p.m.*
	2 23 November ?	2	5 January p.m.*
	3 25 November a.m.		(remaining eggs deserted-rotten-7 January)
	4 26 November a.m.		
	5 28 November a.m.		
	6 30 November a.m.		(One broken 29 November)
4	1 24 May '66 ?	1	4 July '66 13.30*
	2 26 May 12.25	2	5 July 0600*
	3 28 May 06.00	3	5 July 1600*
	4 30 May 06.00	4	5 July 1800*
	5 1 June a.m.	5	6 July 1900 (Died 7th July 1200).
	6 2 June a.m.		2 eggs broken, rotten, 17th and 24th June respectively.
	7 3 June a.m.		

\* Successfully reared.

## APPENDIX

**A suspected case of Leucocytozoois  
in the Black Swan (*Chenopsis strata*).**

(J.A. Tubb, F.A.O. Regional Office,  
Phra Atit Road, Bangkok).  
17/10/63.

A pair of Australian Black Swans, held in captivity in Bangkok, Thailand had mated and were brooding a clutch of five eggs. The brooding pattern was such that the female sat by day and the male by night.

Although apparently normal early in the morning of 22nd September 1963, at about 11 a.m., the male bird was seen floating on his back in the pool and appeared unable to right himself. He was helped from the water but could not maintain equilibrium and at first impression, it seemed that the left leg had been strained.

The male remained on the bank close to the nest for the rest of the day but always lost his balance when he attempted to move.

He fed freely from a food dish placed near him and drank copiously.

That evening, after the female left the nest to feed, the male was placed on the eggs and apparently remained there all night.

At 6 a.m. on 23rd September the male was seen to have left the nest but did not return to the pool, almost complete loss of equilibrium was evident.

Later the same day he was transferred to Dusit Zoological Garden for treatment. The disease was at first suspected to be *Salmonellosis* and injections of anti-biotics were given.

The bird failed to respond to the treatment and died 60 hours after treatment was commenced, i.e. at about 10 a.m. on 25 September 1963.

Post-mortem examination revealed large haemorrhagic areas in the small intestine and caecum with some haemorrhage in the heart, muscle and liver.

A review of the symptoms (unfortunately blood smears were not taken), together with the failure to react to anti-biotics, suggests the possibility of a Leucocytozoon infection.

