

## **BREEDING THE SACRED IBIS (*Threskiornis aethiopicus*)**

### **AT BIRDWORLD**

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The Sacred Ibis (*Threskiornis aethiopicus*) belongs to the order *Ciconiiformes* along with Storks, Spoonbills, Herons and Bitterns. It is associated with three other species from the same genus, the Oriental Ibis (*T.melanocephala*), the Australian white Ibis (*T.mollucca*) and (*T.spinicollis*) the Straw Necked Ibis, the Oriental and Australian White bearing a similar resemblance to the Sacred. They differ mainly through the ornamental feathering originating from the shoulder feathers tracts, the Sacreds being black, the Orientals being white and the Australian Whites being striped black and white.

Within the species *aethiopicus* are classified three sub species, the nominate *T.a.aethiopicus* coming from the African mainland south of the Sahara in line with Ethiopia and Senegal down the continent to the Cape. It is also recorded as breeding in Iraq. *T.a.berneri* heralds from Madagascar mainly in the west and *T.a.abboti* from around the island of Aldabra in the Seychelles. Subspecies differ slightly from the nominate having well defined ornamental feathering which is less defined in the island races. *Abbotti* and *berneri* also lack the fleshy throat pouch.

The name *aethiopicus* (Ethiopian) refers to the period when Ethiopia was once connected to southern Egypt where the Sacred Ibis was religiously honoured by the ancient Egyptians. Although Egypt was part of the former range of the Sacred Ibis it was thought to be in serious decline here as early as the mid 1800's.

Within the existing range the nominate form is migratory moving away from the equator to breed, but staying where possible near some form of water, lakes, rivers and coastal estuaries where it feeds by pecking or probing. It will also feed on dry land around cultivated fields, villages and even in deserts in dryer times. Preferred food items may include insects, reptiles, amphibians, fish, eggs, small birds and mammals as well as carrion, besides vegetable matter and seeds.

The nominate of the species is common throughout its range though comprehensive population estimations are few. Both of the island races are estimated as having low population densities. Groups of Sacred Ibis in the wild can be seen in feeding or roosting flocks of many hundreds, but depending on site facilities their numbers may be fewer, some even feeding as solitary birds.

At Birdworld a group of six birds walk freely on a large paddock mixed with a flock of Flamingos and assorted waterfowl species. A pond at the rear of the enclosure is only used occasionally by the Ibis who normally simply skirt around the edges probing the silt as they go in the search for small items of food.

As far as regular feeding is concerned, the Ibis are fed a tray of sprats, chopped day old chicks, sand eels, soaked Zoo A pellets and a small amount of pheasant grain. The complete tray is given a light sprinkling of vitamin powder. As mentioned earlier the diet is subsidised by foraging around the paddock, they also soon learn to use a variety of automatic duck feeders.

We were lucky enough to find three twig lined nests on the ground at the edge of the pond during the second week in May. They were under cover of surrounding bushes and well hidden from the public viewing area. Only two of these nests actually had eggs laid in them, one from each being taken to the Incubation Research Station for artificial incubation.

The two eggs were from different clutches and weighed 53.27 grams and 70.79 grams. Set at a constant temperature of 37.5 degrees C. both eggs were started with maximum humidity and turned automatically 24 times a day and a further 7 times by hand. Both eggs incubated well and pipped internally at 23 days, unfortunately for the smallest egg this was as far as it got. The remaining egg hatched the following day in a hatcher set at 36.5 degrees C. On the same day one egg hatched with its parents leaving one egg infertile.

On hatching the chick resembled the adult birds in colouration, black down on the head and neck and white over the rest of the body. Bare parts, i.e. the beak and legs were dark grey. Its long legs were well formed, but obviously at this stage inactive.

The chick to be hand reared weighed 49 grams when hatched and was left for 12 hours allowing one feed to be given at 5pm. The diet used began with small pieces of sand eel and pinkie mouse offered with tweezers. Whilst the chick's head was supported by one hand, one finger was placed on each side of the beak to stimulate a begging response. When the beak was open it became easy to see the opening to the trachea. This opening would close once a breath was taken and thus food could easily be passed into the mouth where with slow movements of the tongue the pieces were swallowed.

On the first full day the chick was weighed at 46 grams. Four feeds were given throughout the day at 8am, 11am, 2pm and 5pm where during these feeds six sand eels and one pinkie were consumed producing a 0% weight gain on day two. Weight was still similar on day three so another feed was included in the regime at 8pm, day four then showed a 38% gain to 65 grams.

Day four also saw the first temperature reduction made from 36.5 to 35 degrees C., this temperature was reduced again by about 1 degree per day until day 11 when the growing chick was placed into a small plastic tub, lined with wood shavings and put under a heat lamp.

A diet change was made on day 7 to include strips of sprat. By this age, 5 pinkies and 2.5 cut up sprats were being eaten over four feeds. At the same time, the second of our young Sacred Ibis was lost when abandoned by its parents after a day and a half of very wet weather.

On day thirteen of hand rearing, feeding times were changed to three times a day, 8am, 12 noon and 5pm. The chick was now 376 grams in weight and the down over the body had become thinner as the skin grew. The texture of the skin also changed as feather quills formed. Another diet change was also started, chopped pieces of cleaned day old chicks were added to the sprats in an effort to reduce the use of pinkies. Usual feeds for the next few days were one fish and one chick per feed, still three times a day.

The young Ibis was trying to stand by now, mainly at feed times, but also when he begged between times hoping for an extra snack. Because of the increased standing and strengthening of the legs twigs were used to line the tub to allow the toes to grip and straighten.

By the 24th day the young Ibis was well feathered, standing and walking strongly, weighing 827 grams he had begun to feed himself although would still rather take food offered by hand. In total each feed would consist of about 2 chopped chicks and 4 fish, the first offerings being taken greedily followed by a display of frantic wing flapping and incessant squealing as the chick protested at having to feed itself.

Within the next week feeding independently was mastered and so one bowl of food was given in the morning and again early afternoon. Although there was still plenty of begging to be heard, which seems to be the best remember thing of the entire rearing period, no more items were offered by hand. The chick would spend most of his day perching high in his pen, but soon learned that there were more interesting things to be investigated and was therefore moved out into larger accommodation. There seemed to be little difference between the youngster and its parents at this time apart from the bill which was shorter and not curved and the black neck which was still covered with downy feathers unlike the bald black skin on the adults.