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THREATS TO PARROTS IN AVICULTURE

by Rosemary Low

In recent years we have all heard much about factors which are endangering the existence of parrots in the wild but we also need to give some thought to another aspect. Many of the species which we know in aviculture could die out in our aviaries without more careful planning and a greater sense of responsibility on the part of those who hold them.

Today is the most important period in the history of parrot aviculture. This is because aviculturists currently have in their care many wild-caught birds of species which will never again be imported from the wild. All such birds are potential founders of the stock with which future generations must work. That is, they, and they alone, can pass on genes which are not already present in captive stocks. To ensure that their breeding will be successful for an unlimited number of generations, the gene pool must be as wide as possible. Most aviculturists know about the effects of inbreeding, that is, pairing together closely related birds which genetically are very similar. The result after two or three generations is small and often degenerate specimens, and decreasing fertility.

The greatest threats to parrots in aviculture will result from breeders who hold the rarer species but who do not manage them in a responsible way. By this I mean that they give little or no consideration to the future of the species and that they are mainly motivated by financial gain. As the wild status of so many parrots is not yet well known, and as one out of three of parrot species is known to be endangered in the wild, it is surely prudent to consider almost every one currently known in aviculture to be worth preserving for future generations. Therefore, when I refer to the rarer species, I mean rare in aviculture and/or in the wild.

Some of the threats

Let me illustrate some ways in which irresponsible owners can endanger the captive survival of the rarer parrots.

Failure to cooperate with other breeders or studbook coordinators

One of the biggest dangers is that rare species are obtained by breeders who have only one pair of the species - and usually a collection consisting of one pair only of many different species. If they breed, a couple of youngsters might be sold to someone else - usually the first person who offers to buy them. Ideally, the buyer should already keep the species and is therefore able to offer unrelated partners. Or, he or she will obtain at least one other pair from another source. There are two reasons for this: one is to prevent inbreeding and the other is that selling young which are destined to be the only pair of their species in a collection is the quickest way to ensure its extinction in captivity. So often, when one bird of a rare species dies, the owner either cannot find another to replace it, or cannot afford to do so. Yet he or she does not make the effort to enquire who might need the survivor.

Studbooks are of vital importance in ensuring the survival of rare species in aviculture. The studbook keeper can quickly locate surplus males or females, if they exist, and can place young birds where they will be used to their best advantage. Some studbooks are already operating and I would urge everyone who keeps the relevant species to participate - even if they are not breeders. Just knowing the location of rare species may be important at some stage.

Producing rare species which are unsuitable for breeding

Another threat to parrots is producing young of rare species which are unsuitable for breeding. Young of Moluccan Cockatoos *Cacatua moluccensis*, Hyacinth Macaws *Anodorhynchus hyacinthinus* and Golden or Queen of Bavaria's Conures *Guarouba guarouba* are hand-reared from the egg because they are considered to be desirable pets. Although a few of these birds might find their way back into breeding situations, many of them will not breed. This is because if they have been without contact with their own species from the time of independence until one or two or more years of age, they have not had the opportunity to learn the behaviour of their own species. Some present greater problems in this respect than others. Male cockatoos and Eclectus *Eclectus roratus* kept in this way are more likely to be useless for breeding than Amazons *Amazona* spp., for example.

For this reason, when I hand-reared Moluccan Cockatoos, I isolated them from the age of five or six weeks and kept them in a quarantine room. Their only companion was an adult male Moluccan. As soon as the young ones could fly, they were released from their cage to fly with the adult. I have found that Moluccan Cockatoos which are not reared in this manner cry continually and make food soliciting calls whenever they see a person. This goes on for many months, whereas those reared in an adult's company show normal behaviour and vocalisations.

It is the duty of all responsible aviculturists to ensure that a percentage of the young reared are suitable for breeding and placed in a breeding situation. If this does not happen, when the breeding pairs which currently consist of wild-caught birds die, there will be no suitable birds to replace them.

Legislation and its interpretation

Over 120 countries are members of CITES, the treaty which was designed to protect threatened species from excessive trade. Unfortunately, not only has CITES failed to do that in many instances, but in some cases it has obstructed the work of genuine breeders. Much of the wording of the treaty is vague and has been interpreted differently in various countries. Some of those responsible for implementing CITES seem to have lost sight of the purpose of the treaty.

Some breeders have ceased to keep Appendix 1 species, such as the Moluccan Cockatoo, because of the paperwork involved in selling the young. Breeders of Appendix 1 species must now have the parents and young microchipped and give proof of the origin of the parents before they can sell the young. This seems reasonable in theory but sometimes it can be very difficult. It can be impossible to prove the origin of pairs of Appendix I species which were imported perhaps 20 years ago. Two cases of which I know related to Goffin's Cockatoo *C. goffini* and Golden or Queen of Bavaria's Conures - and the birds had been known to me over this long period. Nevertheless, we must accept that the identification of individual birds in essential to prevent the system being abused.

Lack of exchange of information

Many breeders have accumulated information which would be of great value to others rearing the same species. Unfortunately, much of this information never becomes accessible to others. If aviculture is to realise its full potential, it is absolutely vital that breeders share such knowledge, preferably in the form of the printed word. I do not refer only to rare species. If you study avicultural literature you will find that successes with rare species are well documented. However, detailed and factual accounts of successes with common species are much rarer. Therefore, everyone should carefully record and publish, in words and pictures, accounts of the species with which they have most experience. I believe that we should consider it our duty, in return for the privilege of keeping these wonderful birds.

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THE MANDARIN DUCK

by Philip Schofield

Johnson and Payn (1957), writing of ornamental ducks, stated that the Mandarin *Aix galericulata* ".....by common consent, heads the list both for beauty of colouring and charm of habits." This still holds true nearly half a century later with a much wider range of species commonly available, although the Mandarin's colourful, but less extravagantly plumaged congener the Carolina Wood Duck *A. sponsa*, must run it close. The dainty prettiness of some of the teal is balanced by their smaller size which makes them more vulnerable to predators.

The Mandarin Duck has been in UK aviculture since at least the 1740s (Lever, 1977). London Zoo paid the then enormous sum of £70 (almost US$100 at the present exchange rate) for two pairs in 1830, two years after opening, and achieved the first UK breeding in 1843. Even though increasing numbers were being bred in captivity, Delacour (1954) referred to large numbers being exported from the Far East to Europe and the USA between 1910 and 1940. In the early part of this period they were cheaper than (presumably English-bred) Carolinas. A display advertisement by the dealer Willson's in the 1910 *Avicultural Magazine* offered pairs of Mandarins for 45 shillings (£2.25 or roughly US$3.20 in today's currency) compared with 50shillings (£2.50 or roughly U$3.50) for Carolinas.

A pair of Mandarins became my first exotic ducks in the autumn of 1971. The pair had the run of my parents' Ipswich back garden where they were soon joined by a pair of Bahama Pintail *Anas bahamensis*. The area was roughly triangular in shape, each side measuring about 70ft (approx. 2lm), with the conventional lawn, shrubs and flower beds. Two blocks of aviaries took up some of the ground space, and the ducks had an irregular shaped concrete pond some l0ft x 4ft x 2ft deep in the middle (approx. 3m x 1.2m x 0.6m deep in the middle). The following winter brought prolonged snow and ice, and the female Bahama Pintail had her feet badly frost-bitten. The Mandarins remained noticeably unaffected by the weather, and in subsequent years have always appeared indifferent to cold, although like most animals they dislike strong winds. Part of the attraction of Johnson and Payn's book is their assessment of each species for its potential adverse effect on garden plants. They recommend Mandarins as being completely harmless, and indeed mine caused no complaints from the two keen gardeners in the family. Although they grazed the lawn to some extent, the Mandarins did not even appear to sample flowering plants, even alpines. Although they often perched on the rockery, their tiny feet did no damage. This would not apply to aquatic plants, which are quickly eaten. The garden was

surrounded partly by 6ft (approx. 1.8m) high wooden fence panels, and partly by chainlink wire a little more than half that height. With hindsight, my ducks were not sufficiently protected from predators. However, the local cats did not bother them, and although the garden was bordered by open country, there did not seem to be any Foxes *Vulpes vulpes*. This contrasts with my situation 30 years later here in Dorset, in a town setting, where Foxes are a continual menace, and anything smaller than Shelduck *Tadorna tadorna* need the protection of an aviary to survive. A fox-proof fence is no barrier to our predatory local cats, which have killed ducks up to the size of Pintail *A. acuta*.

For a variety of reasons I did not manage to breed Mandarins until 1974, but have bred them in small numbers most years since then. Nesting naturally in hollow trees, they readily accept nest-boxes, while I find 25 litre (5.4 UK gallon) plastic barrels as good as anything, although not as pleasing to look at as some of the elaborate wooden 'duck cotes' that one can buy. Most of those used by my Mandarins have been placed directly on the ground, although one that was some 3ft (almost 1m) up a sloping tree trunk was especially popular. Over the years, in addition to species of perching ducks, this attracted such conventionally ground nesting species as Common Teal *A. crecca* and Chiloe Wigeon *A. sibilatrix*. At one time I had a pair of Mandarins housed in a large aviary at a children's home where I worked, and they nested in a shed alongside bantams and call ducks. Boxes and other nesting places should be furnished with leaf mould or wood shavings with perhaps a little chopped straw. Hay should not be used, as it tends to attract fungal spores and become a health hazard. Laidlay (1929) referred to a Mandarin nest in long grass, but this must be regarded as exceptional. I have had up to 14 eggs laid in a clutch, of which the 13 hatched were hatched by the duck. I would be reluctant to put this many under a bantam, but a duck in a natural nest site is a very different proposition from artificial incubation. I never leave a broody hen off eggs for longer than 15 minutes, yet incubating ducks seem able to leave their eggs for much longer with excellent hatchability. Seth-Smith (1940) described the descent from a high nest site by Mandarin ducklings at Foxwarren Park, the ducklings being so light that they can fall considerable distances without harm. In the early days, all my Mandarins were hatched and reared by bantams, until I found that with suitable protection from the elements and other birds, the ducks make efficient mothers of their own broods. I usually remove the mother and ducklings to an enclosed shed for the first few weeks, with a floor covering of wood shavings which are changed daily. With a galvanised chicken drinker and a pan of poultry chick crumbs, with greenfood occasionally, rearing is usually uneventful. No bathing facilities are provided until the ducklings' breast feathers are through, at which stage the birds are moved outside.

As with an increasing number of waterfowl the Mandarin is available now in colour mutations. The first to emerge was the silver, which I met with first in the mid-1980s, and which I believe originated in the Netherlands. It is quite striking, with a bright red bill. Basically a white bird, it has all the markings indicated in pale fawn. These birds are probably seen at their best when kept with the normal form, when the contrast is quite pleasing. I have kept silvers since 1992, and bred a few. The ducklings are a little harder to rear perhaps, having red eyes and therefore relatively poor vision and white down that therefore provides less efficient insulation. My normal females usually start laying in April, while the silvers usually wait until May. More recently a blonde variety has appeared. I have not seen it yet, but am prepared to find that like the blonde Carolina, it is something of a disappointment. I have already described (Schofield, 1997) the way in which the silver mutation appears to be inherited, but cannot at this stage do the same for the blonde.

With a view to keeping a breeding stock, I tend to retain younger birds, so have scant data on longevity. However, I suspect that few Mandarins reach their tenth birthday. A male of known age on a friend's pond failed to regain full plumage after its twelfth summer, and died that winter.

There are effectively three ways to keep Mandarins. The conventional way is to surround a piece of land, provided with a pond and appropriate planting, with a fox-proof fence. In this situation the birds should be wing-clipped or pinioned. Allowing them to fly free in the UK could invite prosecution under the Wildlife and Countryside Act, although this has happened only once, and I am not aware of the exact circumstances. It must be debatable whether free-flying exotic waterfowl on one's own land could be regarded as having been "released to the wild"; there is little if any difference between this and that of exotic birds of prey being flown free by falconers. Animal welfare organisations seem able to release into the wild, with impunity, hand-reared orphaned Rabbits *Oryctolagus cuniculus*, another introduced, if long-established exotic.

There are advantages to keeping Mandarins in aviaries. They can be allowed their powers of flight and to exhibit their natural perching behaviour, and will be seen to be surprisingly agile both on the wing and when perching. Under these conditions, so long as ½in (12mm) mesh netting is used, they can be kept completely safe from predators. A minimum size aviary for a pair would be about 200sq ft (approx. 18.5 sq m), that is 10ft x 20ft (approx. 3m x 6m). Anything smaller might result in overcrowding if a brood of grown ducklings is present. The size of the pond is less important that its design. For a mixed aviary, it needs to be saucer-shaped. Shallow edges all round will enable small birds to drink and bathe without risk of drowning. If young passerines are due to fledge, a temporary cover can be placed over the pond and the ducks restricted to a poultry drinker for a week or so until

the newcomers are flying confidently.

Mandarins in my aviaries have caught and eaten frogs that found their way through the wire mesh, and might not therefore be entirely safe with small fledglings. My suggested precaution for preventing this (Schofield, 2000) is to catch fledglings and cage them within the aviary until they can fly well. I use a small all-wire, Spanish call-bird cage, a little bigger than the nest, and the parents feed the fledglings through the wire until it is safe to let them out. While harmless to most other birds, except perhaps small fledglings, Mandarin drakes can be unpleasantly aggressive to other ducks in such a small enclosure. Species they would not bother in a large area may be subjected to unacceptable bullying. This can even extend to a second Mandarin female, if one is attempting to breed from a trio consisting of a drake and two ducks. While such an arrangement has worked well for me in a large area, under aviary conditions one of the females was persecuted and had to be removed. One season I had three drakes and two ducks living as a group in a collection of a dozen (12) species. The Mandarin drakes used to display as a group, and the two ducks reared their 17 ducklings in a group crèche. While the male Mandarin will guard his mate's nest-box throughout the 30 day incubation period, he loses interest when the young hatch, and usually commences his eclipse moult.

A third way to keep Mandarins is to have a low fence around the enclosure, and gently walk the birds into a shed or aviary at night. This can be done only if cats are not a problem, and the local foxes operate only at night. The ducks adapt well to this regime and will breed satisfactorily. The same remarks about aggressive behaviour apply to night confined birds as to those in aviaries. A completely unacceptable practice is to release pinioned Mandarins onto an unfenced area of water, and expect them to stay. Something will eat them, or they will wander off and come to a bad end.

The Mandarin is one of the few ducks that indulges in mutal preening. Any two birds that are on friendly terms may preen each other, usually about the head and neck. It tends to be initiated by a female and is as likely to occur between casual associates as it is between a mated pair. Further aspects of Mandarin social behaviour, some open to alternative interpretation, were described by Wicks (1955). Lorenz (1953) described display functions and postures in some detail.

One winter I had only a single Mandarin, a juvenile female, living in a mixed collection. Ignoring other ducks, she persistently courted a male Golden Pheasant *Chrysolophus pictus*, whose colour scheme might superficially recall that of a Mandarin drake. When a male Mandarin was introduced, the female went to him immediately. Mandarin drakes will pair readily with Carolina females, especially in the absence of a female Mandarin

(males of both species will also on occasion form strong homosexual pair bonds, either intra- or interspecific). However, due to the Mandarin having a different arrangement of chromosomes, hybrids rarely or never result. I can recall a detailed article by A. A. Prestwich in the *Avicultural Magazine*, describing a number of reported cases of Mandarin hybrids, and concluding that none of them was conclusively proven (I do not have the relevant issue, so am unable to quote from it more fully, but have to rely on my memory). Whether the Mandarin has ever produced a hybrid remains debatable. However, while I have seen hybrids produced by Carolinas with a wide range of species from diving ducks such as the Rosybill *Netta peposaca* to such surface feeders as the Chestnut-breasted Teal *A. castanea*, I have never seen a hybrid which had any suggestion of Mandarin parentage.

When I first became involved with Mandarins, they customarily sold for £10 (approx. US$14.20) a pair, twice the asking price for Carolinas. The general opinion in those days was that Carolinas were easier to breed, were almost certain to do so at one year old, and laid more eggs. The more extravagantly plumaged Mandarin also seemed to be more in demand, hence the difference in price. The normal coloured form of both species is currently priced from £35-£40 (approx.US$50-US$57), so what has happened? It would appear that we are seeing the sort of 'artificial evolution' that occurs with domestically bred populations of animals. In this case, there has been selection for Mandarins that lay more eggs in their lifetimes, which could involve laying at a younger age. Allied with a greater effort to breed them, they have effectively caught up with Carolinas in the population stakes. I find that modern Mandarins usually lay at one year old, and still find more budding waterfowl enthusiasts want to start with this species than with its congener. Hence the current pricing situation.

Mandarin eggs tend to be slightly larger than those of the Carolina, and seem to produce slightly larger and more viable ducklings. While ducklings of both species are susceptible to cold and wet in their early days, the more robust Mandarin ducklings seem to start feeding more readily, and a higher percentage survive the critical first week, at least in my small collection. It may be that wild Mandarins in their native Asia breed at higher altitudes than do Carolinas in North America, and need to be that much larger at birth to survive. It is likely that the original gene pool of the captive Mandarin population was much greater than that of the Carolina, with wild-caught Mandarins imported up to the Second World War, long after the declining North American wild population of Carolinas had to be reinforced by captive-bred birds from Europe. The western avicultural/feral population of *A. galericulata* may therefore be genetically more viable than that of *A. sponsa*. The differences in duckling size and genetic diversity may help to explain why the Mandarin has become well established as a wild species in the UK,

while the Carolina has not, despite breeding in a feral state on many occasions. Another factor suggested by Lever (1977) is that Carolina ducklings may be more vulnerable to predation, taking as they do 10 weeks to reach the flying stage, while Mandarins are airborne two weeks earlier.

The Mandarin's history as a feral species in the UK was described by Lever (1977), who mentioned (p.290) free-flying birds at Woburn at the beginning of the twentieth century. The Avicultural Society's role in further introductions may be less well known. In the magazine in June 1929, David Seth-Smith suggested releasing some 50 pairs in the London parks, initially wing-clipped to prevent them from straying, but with the view to eventual naturalisation. He appears to have invited donation of either birds or funds for their purchase. Fitter (1959) described how Alfred Ezra, John Spedan Lewis and W. H. St Quintin jointly financed the project the following year. Ninety-nine wild-caught Chinese Mandarins were released in the parks, some of which were fully-winged and departed immediately, one to Hungary and another to Sweden. The remainder seem to have left as soon as they could. It will never be known to what extent this massive release contributed to the species becoming firmly established as a British bird. Ezra's own full-winged colony at Foxwarren Park in Surrey was just becoming established at that stage, and Fitter went on to summarise the Mandarin's establishment in nearby Windsor Great Park during the 1930s, probably from several sources, including Foxwarren and the London parks.

Certain birds by their beauty and ease of management are particularly suitable for aviculture. Except in so far as many species are likely to depend on captive propagation for their continued existence, rarity holds little relevance. The Mandarin owes its popularity to its hardy constitution combined with attractive colours and elegance of form. As such it is likely to remain numerous as long as there are aviculturists to keep it. Goodwin (1965) suggested, I think rightly, that to become domesticated, a species has to be capable of being bred with the minimum of effort. Anything that requires dedication will always remain in the hands of a few dedicated keepers.

Given that the Mandarin Duck is apparently threatened by deforestation in parts of its range, its establishment as a wild-living British bird must help ensure its continued existence. It appears that the Mandarin may have been part of our fauna some 600,000 years ago; Goodwin (1988) hinted that it could be an analogous case to the Azure-winged Magpie *Cyanopica cyanea* which occurs in the Far East and on the Iberian Peninsula, and nowhere in between. How long does a species need to have become extinct in a given country before releasing it there becomes an introduction rather than a reintroduction? The Wildlife and Countryside Act does not enlighten us here. Certainly the environmental purists would probably prefer that we

had no Mandarins in the UK. Such political correctness fails to consider that (1) the Mandarin's requirements are so specific that it is unlikely to compete with any current native species and (2) our countryside and wildlife are so much products of human intervention (even such an everyday animal as the Rabbit being exotic in origin) that one non-predatory, non-destructive, non-hybridizing species can do little damage to this less than pristine ecosystem, while (3) wild-living Mandarins give a lot of pleasure to (open-minded) birdwatchers and lay people alike.

References

Delacour, J. 1954. *The Waterfowl of the World.* Country Life, London.
Fitter, R. S. R. 1959. *The Ark in Our Midst.* Collins, London.
Goodwin, D. 1965. *Instructions to Young Ornithlogists VI -Domestic Birds.* Museum Press Ltd, London.
Goodwin, D. 1987. Introduced and Re-Introduced Birds in Britain. *Avicultural Magazine* 93,4:226-237.
Goodwin, D. 1988. 'The History of the Birds of Britain' (Review). *Avicultural Magazine* 94,4:228-229.
Lever, C. 1977. *The Naturalised Animals of the British Isles.* Hutchinson & Co., London.
Johnson, A. A. and Payn, W. H. 1957. *Ornamental Waterfowl.* H. F. & G. Witherby, London.
Laidlay, J. C. 1929. Carolina and Mandarin Ducks. *Avicultural Magazine* Fifth Series VII,7:172.
Lorenz, K. 1953. Comparative Studies on the Behaviour of Anatidae. *Avicultural Magazine* 59,3:80-91.
Savage, C. 1952. *The Mandarin Duck.* A. & C. Black.
Seth-Smith, D. 1929. Avicultural Notes. *Avicultural Magazine* Fifth Series VII,6:152-153.
Seth-Smith, D. 1940. The Foxwarren Collection. *Avicultural Magazine* Fifth Series 5,1:3-7.
Schofield, P. 1997. Waterfowl Mutations, Hybrids and the Colour Purple. *Avicultural Magazine* 103,4:147-148.
Wicks, E. 1955. Dispositions of Mandarin and Carolina Ducks of Interest to Bird-Lovers Rather than to Bird-Scientists. *Avicultural Magazine* 61,3:114-117.
Willson's. 1910. (Trade Advertisement). *Avicultural Magazine* Third Series, Vol.1.

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INTERNATIONAL WILD WATERFOWL ASSOCIATION'S ANNUAL CONVENTION

The International Wild Waterfowl Association's Annual Convention will take place in San Diego, California, starting on October 16th 2002. Visits to the famous San Diego Zoo and San Diego Wild Animal Park will be on the agenda and visits to other collections are being planned. Members of the Avicultural Society are most welcome to join the association. Further details are available from Christopher Marler (Tel/Fax: 01234 711451).

SCARLET IBIS INCUBATE SACRED IBIS EGGS AND PARTLY REAR A SACRED IBIS CHICK

by Brett K. Bannor

Abstract

The nests of two pairs of Scarlet Ibis *Eudocimus ruber* were parasitized by a Sacred Ibis *Threskiornis aethiopicus* at Metrozoo, Miami, Florida, USA. The Scarlet Ibis incubated the Sacred Ibis eggs despite the dissimilarity between these eggs and their own. One Sacred Ibis chick was partly reared by Scarlet Ibis parents. The significance of this behaviour is discussed.

In the wild, ibis (family Threskiornithidae) are known to occasionally engage in intraspecific brood parasitism. For example, in a population of White Ibis *E. albus* in South Carolina, USA, 2.7% of all eggs laid were laid by intraspecific brood parasites (Kushlan and Bildstein, 1992). Conversely, interspecific brood parasitism involving wild ibis has apparently not been reported. A number of studies of wild colonies have not reported ibises laying their eggs in the nests of other wading birds or vice versa even where mixed species breeding assemblanges made such activity possible (ffrench and Haverschmidt, 1970; Urban, 1974; Bildstein, 1993).

In captivity, birds that are not sympatric in the wild are housed together sometimes, providing opportunities for brood parasitism that would otherwise not be possible. This paper describes the unusual series of incidents in which a captive Sacred Ibis laid eggs in the nests of two pairs of Scarlet Ibis at Metrozoo, Miami. These eggs were accepted by the Scarlet Ibis and one Sacred Ibis chick was partly raised by a pair of Scarlet Ibis.

Five Sacred Ibis were among the birds housed in a 0.6 hectare (approx. 1½ acre) open air, walk-through aviary at the zoo, prior to August 24th 1992. On that date, Hurricane Andrew struck the zoo, destroying the aviary and liberating over 200 birds. Over the next several weeks, traps were set and many of the escaped birds were recaptured. One of the Sacred Ibis flew out of the zoo grounds and was never recaptured, but the other four remained on site, roosting usually in an open exhibit housing a species of African antelope, the Gerenuk *Litocranius walleri*, and a group of pinioned Abdim's Storks *Ciconia abdminii*.

The three male Sacred Ibis were eventually caught and pinioned, but the fourth, a female, was not recaptured. The three males were subsequently placed back in the Gerenuk display and the full-winged female spent most of her time with the pinioned birds. She did, however, occasionally fly some 730m (approx. 800yds) across the zoo to an open exhibit containing seven pinioned Scarlet Ibis, along with over 50 Caribbean Flamingos

Phoenicopterus ruber ruber, two Roseate Spoonbills *Ajaia ajaja* and numerous waterfowl. In 1995 and 1996, the female Sacred Ibis paired with one of the pinioned males, nested, and raised chicks in the Gerenuk exhibit. In 1997 she laid again, beginning on April 20th. When checking on May 5th, the two eggs were missing and had apparently been predated.

On May 15th I searched the Scarlet Ibis exhibit for a nest and found one on the ground tucked beneath a large-leaved *Philodendron selloum*. This nest (nest A) contained four eggs. Three of them had been laid by a Scarlet Ibis, but the fourth obviously had not its size and appearance suggested that it had been laid by the Sacred Ibis. This was confirmed on June 1st, when a Sacred Ibis chick hatched in the nest. The Scarlet Ibis fed and cared for the Sacred Ibis chick. However, on June 3rd it was removed from the nest for hand-rearing because it was approximately twice as large as the Scarlet Ibis hatched on June 2nd, leading to concern that the younger chick would be unable to compete successfully for parental care. A second Scarlet Ibis chick hatched on June 6th; both these chicks were successfully raised to maturity by their parents.

When removed from the nest, the Sacred Ibis chick weighed 108g. Two Sacred Ibis chicks hand-reared at the zoo in 1987 weighed 38.5g and 31.8g, respectively, at hatching. If the chick hatched under the Scarlet Ibis parents was of a similar weight at hatching, it must have approximately tripled its initial weight in only two days, demonstrating the high level of attention it must have received.

Another pair of Scarlet Ibis nested simultaneously approximately 2m (6ft 6in) from the first pair and laid a single egg on May 17th. When checking on June 8th, I discovered that a Sacred Ibis egg had been laid in this nest (nest B). When the nest was checked on June 14th, it contained a second Sacred Ibis egg and the Scarlet Ibis egg was missing. A third Sacred Ibis egg was laid in the nest on June 16th. There was now a clutch composed entirely of three Sacred Ibis eggs, which the pair of Scarlet Ibis continued to incubate.

One of the eggs was cracked and found to contain a dead embryo when the nest was inspected on June 27th. Sacred Ibis eggs have an incubation period of about 28 days (Urban, 1974), therefore, the remaining two eggs were expected to hatch by mid-July. On July 11th, however, it was noticed that neither bird was on the nest and an inspection revealed that both eggs were gone. They may have been predated, or may have been knocked out of the nest and fallen into the lake adjacent to the nest. The pair of Scarlet Ibis had been sitting for a total of 55 days, the final 27 days having been spent incubating a clutch composed entirely of Sacred Ibis eggs.

The above incidents are noteworthy for three reasons. Firstly, it shows that in captivity at least, the same female Sacred Ibis may incubate her own

eggs one breeding season and become a brood parasite in another breeding season. Secondly, since in this case the female Sacred Ibis was able to fly and her mate was not, it was evident that the female essentially abandoned her mate at the present nesting site to lay at another location some 730m (approx. 800yds) away. That she would do so is surprising, in light of the statement by Hancock et al. (1992) that: "(A strong) pair-bond is the key to successful nesting. . ." in ibis and related wading birds. In this case the pair bond between the male and female Sacred Ibis in 1997 would seem to have been quite loose, leading to her departure from his enclosure and to her laying her eggs in the nests of two pairs of Scarlet Ibis and leaving them to incubate her eggs. In the first instance (nest A), this could still be considered to have been successful, as a healthy chick resulted from this unusual behaviour.

The third reason that the incidents described were noteworthy is that the Scarlet Ibis accepted the Sacred Ibis eggs despite the differences in size and colour between the eggs of the two species. Urban (1974) reported that Sacred Ibis eggs average 63.4mm x 43.9mm, while ffrench and Haverschmidt (1970) listed mean measurements for Scarlet Ibis eggs of 56.0mm x 37.1mm. Coloration of the two species' eggs is also different. Sacred Ibis eggs are dull white with a faint bluish tinge and occasionally a few dark reddish spots, whereas Scarlet Ibis eggs are dull olive green to buff with dark brown markings (ffrench and Haverschmidt, 1970; Urban, 1974; pers. obs.). These differences in size and coloration, while readily discernible to me in the cases noted above, did not dissuade the two pairs of Scarlet Ibis from incubating the Sacred Ibis eggs.

As nest B was clearly visible from across the lake, I was able to check whether the Scarlet Ibis were sitting on the eggs in the nest without disturbing them; this I did at least twice a day on my working days throughout the incubation period. Never did I observe the nest without one parent being in attendance. This suggests that in order to lay three eggs in nest B over the eight day period, which it did, the female Sacred Ibis was probably not able to sneak up to the Scarlet Ibis nest without the owner's knowledge. I did not observe nest site interactions between the Sacred Ibis and the pair of Scarlet Ibis, but it seems probable that the female Sacred Ibis could have used her size advantage to force the sitting Scarlet Ibis off the nest. As both nesting pairs of Scarlet Ibis returned rapidly to their eggs after I had made an inspection, it is similarly unlikely that disturbance by another ibis kept them from their nest for long.

Acknowledgements

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References

Bildstein, K. L. 1993. *White Ibis: wetland wanderer.* Smithsonian Institution Press, Washington DC.

ffrench, R. P. and Haverschmidt, F. 1970. The Scarlet Ibis in Surinam and Trinidad. *Living Bird* 9: 147-166.

Hancock, J. A., Kushlan, J. A. and Kahl, M. P. 1992. *Storks, ibises, and spoonbills of the world.* Academic Press, London.

Kushlan, J. A. and Bildstein, K. L. 1992. White Ibis. In: *The Birds of North America, No.9* (Poole, A. , Stettenheim, P. , and Gill, F., eds.). The Academy of Natural Sciences, Philadelphia and The American Ornithologists' Union, Washington, DC.

Urban, E. K. 1974. Breeding of Sacred Ibis (*Threskiornis aethiopica*) at Lake Shala, Ethiopia. *Ibis* 116: 263-277.

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* * *

CONURES NEST IN KENT

In April 2001, a fifth species of parrot, the Blue-crowned Conure *Aratinga acuticaudata*, was discovered nesting in the wild in the UK. A nest with four eggs was found in a park in Lewisham, Kent, but by May 6th, the nest had been abandoned and the eggs were missing, possibly taken by a Grey Squirrel *Sciurus carolinensis*. This species of conure was first reported in Bromley in 1997, when two were observed visiting a bird feeder. In 1999 a flock of 15 was observed. An account of this nesting attempt, observations on this species in the wild in the UK and a summary of three of the four parrot species - the Rose-ringed or Ring-necked Parrakeet *Psittacula krameri*, Alexandrine *P. eupatria*, Monk or Quaker Parrakeet *Myiopsitta monachus* and Budgerigar *Melopsittacus undulatus* - that have or continue to nest in the UK, are given by Chris Butler, Grant Hazelhurst and Kristie Butler in First nesting by Blue-crowned Parakeet in Britain, *British Birds* 95, 1:17-20 (January 2002).

Last Christmas, long-time member Derek Goodwin, who lives near Bromley, Kent, wrote saying that from at least November 10th - December 5th 2001, there were two Senegal Parrots *Poicephalus senegalus* flying about where he lives. By Christmas they had disappeared and he feared they might have died in the cold weather at that time.

NOTES ON THE FEEDING AND NESTING OF OLIVE PIGEONS

by Neville Brickell

The African Olive Pigeon *Columba arquatrix* is also known as the Rameron Pigeon, Yellow-eyed Pigeon or Speckled Olive Pigeon.

In the wild it feeds predominately on fruits and berries, as well as eating seeds and insect life, most notably caterpillars. It feeds in the forest canopy on both indigenous and introduced trees, also on bushes and has been recorded at lower elevations raiding cultivated fruits such as olives, grapes and mulberries. Apparently it never descends to the ground to drink, but has been observed descending to the ground to feed on the hard seeds of *Croton macrostachys* in the central African country of the Congo. In Cape Province, South Africa, it has been seen consuming seeds of the Stone Pine *Pinus pinea*, which contain an oily endosperm, and also those of a black wattle *Acacia* sp., an exotic grown for commercial purposes. A single bird was observed eating seeds from a tree known locally here in South Africa as the Rooikrans *A. cyclops*, which despite its South African sounding name is native to Australia. Bugweed *Solanum mauritianum*, red when mature, is a favourite of this species, as is the Ink-berry bush *Phytolacca dodecandra*, as reported from Zimbabwe. Back in 1927 an extensive study of the feeding habits of the African Olive Pigeon was undertaken in the Knysna Forest, in which the fruits or berries of close to 30 trees were found to be consumed by this species. These included:

Bush Gwarri *Euclea crispa*	4mm-5mm long black when mature	October-February
Cape Plane *Ochna arborea*	orange-red to red	August-November
Common Saffronwood *Cassine papillosa*	pale lemon yellow when mature	August-March
Red Saffronwood *Cassine crocea*	white to pale yellow	March-September
Cape Ash *Ekebergia capensis*	dark red, streaked yellow sometimes, pink to bright red when mature	December-April, or even as late as June
Hard Pear *Olinia ventosa*	pink or red	December-June

White Pear *Apodytes dimidiata*	black with bright red succulent heel	December-June
Thorn Pear *Scolopia zeyheri*	red to pink when mature	July-September
Ironwood *Olea capensis*	purple when mature	February-September
Large-flowered Ochna *Ochna atropurpurea*	bright red	September-November
Notsung *Halleria lucida*	black when mature	May-December
Poison-peach *Diospyros dichrophylla*	golden velvety	April-October
Stinkwood *Ocotea bullata*	purple	March-June
Wild Grape *Rhoicissus tomentosa*	purplish-black when mature	January-April

Observations have also been made on the feeding habits of captive pigeons living in bird gardens and zoos in South Africa. Fruits provided have included guavas, apples, grapes, apricots, pawpaw (papaya) and tomatoes, when necessary cut into 10mm (slightly less than ½in) cubes. Banana is extremely popular, immersed first in diluted milk, to reduce the stickiness. Dried and soaked raisins, sultanas and currants were always available, and they were offered steamed diced carrots, shelled garden peas and corn, mostly of the red varieties that had been stripped from the cob. Lettuce and watercress were the preferred greenfoods. A mixture of various grains was also offered, including whole maize which apparently they have no difficulty swallowing. I was unable to identify all the ingredients of the softfood mixtures, but believe these included nectar, bread and milk, pound cake, crushed dog biscuits, sponge rusks, boiled rice and egg food. A popular brand of South African softfood contains wheat flour, whole fresh eggs, salt, soya flour, niger and maw seeds, plus vitamins, minerals and trace elements. As this species is partly insectivorous, mealworms were also supplied, though sparingly. Food was placed on trays well off the ground, each covered by a canopy to protect the food from rain. Water should preferably be provided in glazed ceramic dishes or pots, as in a controlled experiment in Australia these and glass dishes showed considerably lower bacterial growth (Brown, 1995).

Despite being a common species over much of its range, relatively few nests have been found. Of the 15 recorded in South Africa, six were at

N. Brickell

African Olive Pigeon

heights of 6m-14m (approx. 20ft-46ft), a further seven were between 2m-6m (approx.6ft 7in-20ft) above the ground and the remaining two were only lm-l.5m (approx.3ft 3in-5ft) from the ground. Nests were located in gardens, open rolling country, near the coast in a grove of milkwoods *Sideroxylon* sp., and at the foot of a waterfall. A nest in Zimbabwe was in a wooden gully. Both indigenous and exotic trees and bushes are utilised for nesting.

The nest is a fairly substantial platform of loosely arranged twigs, coarser ones forming the base and finer ones the saucer-shaped central depression, which is lined with a few green leaves. A nest under observation in the Chimanimani Mountains of Zimbabwe had been built of heather instead of twigs and was lined with just three green leaves. One nest in South Africa measured 13cm (approx.5in) across and another 19cm (approx. 7½in). Breeding has been recorded in all months, but in southern African countries probably occurs most frequently during the cooler months of April-June. There is usually just a single egg but clutches of two eggs, attributed to the African Olive Pigeon, have been recorded in the Congo. The eggs are white with a glossy surface and measure about 39mm x 29mm. The incubation period is 17-20 days (16-20 days in captivity), with both birds being involved. The nestling period is 19-22 days (19-20 days in captivity). Melkkamer in western Cape Province, South Africa, and Engel (in Uys) observed nesting behaviour which constituted a nestling period of 20 days, with young becoming independent shortly thereafter.

Both in captivity and in the wild this species has been observed to have little fear of human beings. While photographing it, Uys noted that he could walk up to the base of the tree in which this pigeon was nesting, without disturbing the sitting bird. If the bird was disturbed, it would return within 15 minutes and continue incubation. While he was erecting and dismantling his hide it tolerated any amount of movement and was not easily displaced.

My knowledge of this species in captivity has been limited over the years to those I have seen when visiting bird gardens and zoos in southern Africa, and the private collection of John Muller, for many years a breeder of the African Olive Pigeon, who kindly allowed me to photograph his birds. My observations have revealed that nests may be built among growing foliage, as well as in artificial receptacles such as wire baskets (fixed in forks of trees) and wooden trays with sides varying from 6cm-l0cm (approx. 2¼in-4in) high, that prevent the egg from rolling off and the nestling from making an early exit from the nest. An example can be seen in my photograph (p.68) showing a nestling in one of John Muller's aviaries. Nesting materials have consisted of teff grass, lucerne stalks, small twigs, notably the dried midribs of Flamboyant trees (much favoured for providing a splash of colour along pavements in KwaZulu-Natal, South Africa), pine needles and, in Zimbabwe, tobacco plant stalks. The only lining, if it has been recorded,

has been dried moss and weeds. By questioning aviculturists employed by bird gardens and zoos, I have learnt that one to three day old young are scantly covered with pale golden yellow hair-like down. The eyes open at five to seven days. At seven to eight days the amount of crop milk fed to the young is usually reduced and they are fed softened grain and fruit from the parents' crop.

The Cameroon Olive Pigeon *C. sjöstedti*, more commonly known as the Cameroon Rameron Pigeon or Sjostedti's Pigeon, feeds on seeds and fruits of various trees, especially yellowwoods *Podocarpus* spp. and figs *Ficus* spp. The single breeding record is of a nest in the month of May, 8m (approx. 26ft) above the ground in the horizontal fork of a forest tree. The loosely constructed nest was made of criss-crossed sticks and contained a single white egg with a smooth, glossy surface. The egg measured 37.9mm x 27.2mm. In captivity a clutch contained two eggs. The incubation period was 16 days and the nestling period 19 days. Besides the usual commercially cultivated fruits the birds were offered Wild Plums *Harpephyllum caffrum*, cultivated White Mulberries *Morus alba* and Natal White Figs *Ficus natalensis* Syn. *F. burkei* (Beckx pers. comm.).

The Comoro Olive Pigeon *C. pollenii* has also been called the Comoro Pigeon and Comoro Wood Pigeon. It feeds on berries and seeds and probably also takes insect life, including caterpillars. All of the stomachs that have been examined have contained fruits; those of birds from Mayotte mostly the fruits of the stinkwood *Octotea* sp., which produces acorn-like oval fruits about 2cm ($1^3/_4$in) long that are in season from February-June or later. Grit was also present in the stomachs of seven specimens.

This species breeds in dense evergreen forests, with a record of a nest 5m (approx. 16ft) above the ground near the topmost branches of a tree that had been pollarded and had a close rounded head of young branches. The male was incubating a fresh egg, which was white with a smooth, glossed surface. The egg measured 39.7mm x 30.5mm. Occasionally, two eggs have been recorded. Females examined during August and November have been found to be holding small yolking oocytes (individual cells, each of which can produce an ovum or egg). A bird collected in November was no more than three months old. However, this species probably breeds throughout the year. There appear to be no records of the Comoro Olive Pigeon having been bred in captivity.

The São Tomé Olive Pigeon *C. thomensis* is also known as the São Tomé Maroon Pigeon or Maroon Pigeon. In the wild it has been observed feeding on the dark red berries of the Montane Tree *Schefflera mannii*. The only other type of food recorded being seeds of an unidentified origin. Nothing appears to be known of its breeding habits in the wild and I have no knowledge of any being held in captivity.

N. Brickell

African Olive Pigeon nestling

References and bibliography

Benson, C. W. 1960. Birds of the Comoro Islands. *Ibis* 103b,l:5-106.

Brickell, N. and Konigkramer, T. (eds.). 1997. *African Birds in Field & Aviary*. African Bird Book Publishing, Durban, South Africa.

Brown, D. 1995. *A Guide to ... Pigeons, Doves and Quail*. ABK Publications, Tweed Heads South, NSW, Australia.

Palgrave, K. C. 1988. *Trees of Southern Africa*. Struik Publishers, Cape Town, South Africa.

Rowan, M. K. 1983. *The Doves, Parrots, Louries & Cuckoos of Southern Africa*. David Phillip Publishers, Cape Town, South Africa.

Tarboton, W. 2001. *A Guide to the Nests and Eggs of Southern African Birds*. Struik Publishers, Cape Town, South Africa.

Uys, C. J. 1967. Breeding of Rameron Pigeon *Columba arquatrix*. *Ostrich* 38,3:201-202.

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VON DER DECKEN'S HORNBILL *Tockus deckeni* AT THE OKLAHOMA CITY ZOOLOGICAL PARK

by Chris Smith

Hornbills are a family of birds aptly named for their large distinctively shaped beaks that curve slightly downward. Those of some species are adorned by a casque and this and the beak of some species are brightly coloured and may have vivid patterns. Hornbills are found in a variety of habitats, ranging from semi-arid savannah to dense tropical rainforests. Most of the large forest-dwelling species tend to be predominantly frugivorous, while the smaller brush-dwelling hornbills tend to be generally predominantly insectivorous or carnivorous. Hornbills are exclusively Old World inhabitants.

Although hornbills are distinctive in their outward appearance, it is their breeding behaviour that sets them apart from all other birds. As most if not all members know, what makes hornbills unique is that the females (with the exception of the ground hornbills *Bucorvus* spp.) seal themselves inside the nest cavity, behind a wall of mud, excreta and items of uneaten food. Once egg-laying has begun the females moult their flight and tail feathers and are flightless until new feathers grow. While incubating the eggs and brooding the chicks, the female is dependent on the male to bring food for her and the chicks, which is passed in through a narrow slit left in the plaster. With many of the smaller species, such as Von der Decken' s, the female may spend approximately two months in the nest, after which she breaks out through the plaster that is then repaired from within by the chicks (using food and/or excreta), which remain in the nest for several more weeks. Having left the nest, the female assists the male bringing food for the chicks. In the case of some of the larger species, the female may remain sealed in the nest cavity for in excess of 100 days.

The family of hornbills, Bucerotidae, comprises 54 species and is divided into two subfamilies. Most species belong to the subfamily Bucerotinae, the typical hornbills. The two species of ground hornbill, which constitute the subfamily Bucorvinae, differ from the others in that the females do not seal themselves in the nest cavity.

Von der Decken's Hornbill

Von der Decken's Hornbill *Tockus deckeni* is one of the smaller species of hornbill, measuring roughly 47cm (18½in) long and weighing up to 212g. Females are generally smaller and weigh slightly less than males. This hornbill has black upperparts and white underparts, with some white on the wings and white outer tail feathers. The male's bill is mainly red at the base and pale orange to yellow or ivory at the tip (see photo p.72). That of the

female is wholly black and is proportionally smaller.

Von der Decken's Hornbill is found in semi-arid savannah and open woodland from central Ethiopia and southern Somalia, southwards through eastern Kenya to central Tanzania (considered a subspecies by some, but a full species by others, Jackson's Hornbill *T. d. jacksoni* or *T. jacksoni* is found from central Ethiopia to south-east Sudan, north-east Uganda and north-west Kenya). Von der Decken's Hornbill is sedentary, with pairs establishing territories.

The diet of Von der Decken' s Hornbill consists mainly of insects, but it also consumes small vertebrates, fruits, berries, seeds and buds. It forages mostly on the ground. Von der Decken's Hornbill has developed a rather unusual symbiotic relationship with the Dwarf Mongoose *Helogale undulata*. The hornbills forage alongside the mongooses, preying upon insects flushed out by their activities. The mongooses benefit from the presence of the hornbills in that the birds warn of potential predators, allowing the mongooses to spend less time on sentry duty. This relationship has evolved to a point where each species will wait for the other to begin foraging. Von der Decken's Hornbills will even go as far as waking their partners by vocalizing loudly at the entrance to the mongooses' den should they remain inside too long in the morning.

Von der Decken's Hornbill is considered to be common throughout its range, that overlaps several national parks and reserves, which should help ensure the survival of this species.

In captivity

The captive population of Von der Decken's Hornbills in North American institutions is quite modest, with at June 2001, according to the International Species Information System, 56 (26.22.8) specimens. This number does not include birds that are in private collections.

Oklahoma City Zoological Park has exhibited Von der Decken's Hornbills since 1989, when a wild caught pair was added to the zoo's animal collection. The birds were housed in an enclosure that measured roughly 4m wide x 3m deep x 4m high (13ft wide x 9ft 9in deep x 13ft high).

The diet offered by the zoo consists of a blended predominately fruit mix (chopped apples, grapes, carrots, oranges, raisins, corn kernels and celery), soaked Wayne Bite dog food, ZuPreem Marmoset Diet, Nebraska Bird of Prey Diet, chopped hard-boiled egg, Apple Paradise pellets, soaked Mazuri Monkey Crunch 20 biscuits, live crickets, mealworms and waxworms. Two vitamin supplements, Vionate and Osteo-form, are added to the diet on a daily basis.

The hornbills hatched their first chicks within a year of their arrival. For the next several years, the pair continued reproducing, until the male died in 1995. Fortunately, a new male was acquired from Denver Zoo later that

year. The new male was introduced to the female without any difficulties and the pair has since become quite prolific, producing 17 offspring to date.

In December 1998, the zoo's hornbill programme nearly took a turn for the worse when the female suffered a broken left leg. Despite the efforts of the veterinary staff, the female's leg would not heal properly and the hornbill did not help matters by frequently picking at the bandages and cast. After six months of unsuccessful treatments, the hornbill's foot was amputated. The female recovered and adapted to a continued productive life despite having only one foot.

The exhibit

Although the enclosure the hornbills resided in was suitable for their needs, the birds were removed from the exhibit while it was remodelled in the spring of 2001. The new exhibit has been designed to better feature the breeding biology of hornbills. Therefore it is centred on the nest site, which is a large semi-circular section of a cottonwood tree *Populus* sp., approximately 1.7m (6ft 3in) in height and 70cm (2ft 4in) in diameter. Although the tree had been dead for several months, the exterior was solid and it appeared to have rotted from the inside. A nest-box was built into the tree from behind, with the top and bottom cut to fit the interior perimeter of the tree and with the back of the box flush with the back of the tree. An opening approximately 10cm (4in) in diameter was cut in the tree as the entrance to the box, in which was placed pine bark mulch before it was attached to the tree.

To showcase this aspect of the hornbill's life cycle, two small Achiever Security System surveillance cameras were installed in the nest-box. One was placed on the top of the box to provide an overview of the nest and the other was mounted at the side of the nest, with holes drilled through which the cameras could film activity in the nest. The camera cables were run through a PVC pipe, which led from the tree and along the ceiling of the exhibit, to monitors mounted outside the exhibit where zoo staff and visitors could observe activities in the nest. A VCR was also wired into the system, allowing zoo staff to record activities in the nest and review them at more convenient hours.

A dead cedar tree *Cedrus* sp. provides most of the perching for the hornbills in the exhibit, which is landscaped to resemble arid grassland. Several varieties of grasses are used including *Miscanthus*, *Andropogon* and *Calamagrostis* spp. The substrate is topsoil and sand.

On March 29th 2001, the pair of hornbills was introduced into the newly remodelled exhibit. The birds began investigating the nest-box literally within a few minutes of their release into the exhibit. The two were frequently seen performing courtship displays in which each bird would spread its wings and lower its head while uttering a series of continuous clucks. The male

Chris Smith

Male Von der Decken's Hornbill

was also observed carrying food items to the nest, even though the female was not inside yet. By April 3rd, construction of the nest entrance had begun. Both birds were seen working on it, but it appeared that the female did the majority of the work.

On April 9th, the female had sealed herself in the nest. At this point, both cameras were providing footage of the bird in the nest. Unfortunately though, the female noticed the small gap through which the side-mounted camera was pointed, and began to plaster this opening. For a brief period, zoo staff and visitors were given the opportunity to view close-up footage of the hornbill's plastering techniques. Luckily, the camera was undamaged. The female appeared to be unaware of the opening in the roof of the nest-box, thus allowing zoo staff and visitors an overhead view of the nesting behaviour of the hornbill.

The male was observed gathering blades of grasses and delivering them to the female after she had sealed herself in the nest. The female spent many hours lining the nest with the grasses to her specifications. The preferred type appeared to be *Miscanthus*. On April 15th, the female laid her first egg. Three days later, a second egg was laid. After yet another three days, a third egg was laid. A fourth egg was laid, but was seen only when reviewing the video recordings. The female was very attentive to the eggs. Only on one occasion was she off the eggs long enough for all four to be

Chris Smith

One-footed female

seen. The first chick hatched on May 9th, after a 24 day incubation period. A second chick was seen three days later, and a third three days after the second. The fourth chick was not seen in the nest, as the female constantly covered at least one or two of the chicks. After the first chick hatched, live insects were offered several times throughout the day. More than enough insects were offered each day, as there were consistently insects left over from the previous day.

On May 27th, one of the younger chicks was found dead outside of the nest-box. Two days later, another dead chick was found ejected from the nest. One of these was the fourth chick that had not been seen on the monitor. The two oldest chicks, which were considerably larger than the two younger chicks, were clearly visible on the monitor. The causes of death of the two chicks were never determined, but it is reasonable to suspect that they were out-competed for food, even though there were plenty of insects offered. The loss of the two chicks was unusual, as the pair had previously reared as many as five chicks without any losses. The remaining two chicks appeared to be in good health and were growing rapidly. At about four weeks of age, they had grown most of their contour feathers and looked like miniature versions of the adults.

On June 4th, the female exited the nest, 56 days after she had sealed herself in the nest cavity. The first chick left the nest on June 23rd aged 45 days. The second chick fledged the following day. The chicks continued to be fed by the adults for the next couple of weeks.

After the chicks left the nest, the video monitor was turned off. Although the camera and monitor system was in use for less than three months, the time and resources put into incorporating it into the exhibit was well worth it. Not only did it provide a means of entertaining and educating zoo visitors, it also allowed zoo staff to accurately document the nesting cycle of Von der Decken's Hornbill. The time the female sealed herself in the nest to the time the first egg was laid was recorded, as well as the precise incubation periods and fledging dates. Most references list only estimated incubation periods, often citing the time from when the female was sealed in the nest to when chicks were first heard in the nest cavity . The surveillance system, which includes two cameras, a monitor and all the necessary cables, was surprisingly inexpensive, costing approximately US$90 (£60-£65).

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Bibliography

Fry, C.H., Keith, S. and Urban, E.K. 1988. *The Birds of Africa*. Volume III. Academic Press Inc., San Diego, USA.

del Hoyo, J., Elliot, A. and Sargatal, J. 2001. *Handbook of the Birds of the World* Volume 6, Mousebirds to Hornbills. Lynx Edicions, Barcelona.

Kemp, A. 1995. *The Hornbills*. Oxford University Press, Inc., New York.

Paterson, L. 1992. Breeding the Von der Decken' s Hornbill at Leeds Castle, Maidstone, Kent in 1990. *Avicultural Magazine* 98,2:44-47.

Zimmerman, D., Turner, D.A. and Pearson, D. 1999. *Birds of Kenya and Northern Tanzania*. Princeton University Press, Princeton, New Jersey, USA.

Products mentioned in the text

Achiever Security System & Remington Achiever Security System. Manufactured by Achiever Security, Miami, Florida, USA.

Apple Paradise Food. Manufactured by Marion Zoological, Plymouth, Minnesota, USA.

Mazuri Monkey Crunch 20. Manufactured by PMI Nutrition International Inc., Brentwood, Missouri, USA.

Osteo-form. Manufactured by Vet-A-Mix, Shenandoah, Iowa, USA.

Vionate Vitamin and Mineral Powder. Manufactured by Gimborn-Rich Health, Atlanta, Georgia, USA.

Wayne Bite Meat and Bone Meal Formula. Manufactured by Royal Canin USA, Inc., St. Peters, Missouri, USA.

ZuPreem Marmoset Diet. Produced by Premium Nutritional Products Inc., Mission, Kansas, USA.

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A SUMMARY OF PITTAS IN EUROPEAN ZOOLOGICAL COLLECTIONS

by Malcolm Ellis

"Pittas have long been popular avicultural subjects, which given the right conditions do well, expect this is when it comes to breeding. Breeding successes remain relatively uncommon ..." I wrote in my introduction, when I reprinted the late Jean Delacour's account of breeding the Hooded Pitta *Pitta sordida* (*Avicultural Magazine* Vol.103, No.3, pp.120-123 (1997)), first published in the magazine in 1934, prior to which no species of pitta had bred or even nested in captivity.

In the introduction I mentioned that a few years later Delacour succeeded in breeding Elliot's Pitta *P. ellioti*. I also mentioned the breeding of the Bengal or Indian Pitta *P. brachyura* in Edward Marshall Boehm' s aviaries; the Blue-winged Pitta *P. moluccensis* at the Wildfowl Trust, Slimbridge; the Hooded Pitta at Birdland, Bourton-on-the-Water and the Banded or Van der Bosch's Pitta *P. guajana irena* at Blackpool Zoo.

There have been other breedings, some since I wrote the introduction, and some before 1997 which I was unaware of, or missed, such as the breeding of the Giant Pitta *P. caerulea* at San Antonio Zoo, Texas, described here in the *Avicultural Magazine* (McKelvey and Miller, 1979). *Pittas of the World - A Monograph on the Pitta Family* by Erritzoe and Erritzoe (1998), has for each species (it lists 30) a section headed - Captivity - from which I have learnt that 24 Banded Pittas were reared at New York Zoological Park (presumably in the mid-1970s). All it would seem were hand-reared, after the earliest nestlings died after the first few days. For more than half of the species there is no information under this heading, nothing having been published about them in captivity, mostly because they have never been kept. This is no longer true, however, of the Garnet Pitta *P. granatina* which was recently kept by Raymond Sawyer at Cobham; the Black-crowned or Graceful Pitta *P. venusta*, of which single examples are currently kept at Alphen a/d Rijn in the Netherlands and Vogelpark Walsrode, Germany; and the Elegant Pitta *P. elegans*, which has recently been bred at Cologne Zoo, Germany (Pagel, 2000).

Earlier this year, along with the photo of the Black-crowned or Graceful Pitta (p. 77) taken at Vogelpark Walsrode in 1998, I was sent a copy of a paper titled *Pittas (Pitta spp.) in Europe, summarized as of 30 August 2001*, the work of Marc Damen, Burgers' Zoo, Arnhem, the Netherlands, which has been very successful recently breeding the Hooded Pitta.

Marc Damen has kindly given me permission to make use of his work, and what follows are 'edited highlights' of his summary of the seven species

of pitta that are or have been exhibited recently in EAZA (European Association of Zoos and Aquaria) institutions, plus a few added observations of my own.

Indian Pitta *P. brachyura*

Antwerp Zoo, Belgium, had a male Fairy Pitta *P. b. nympha* (treated as a full species, *P. nympha*, by Erritzoe and Erritzoe, 1998) from May 1996-March 2001, when it died . *P. brachyura*, once a familiar pitta in aviculture, has with the death of this bird, now disappeared from EAZA collections.

Elegant Pitta *P. elegans*

Cologne Zoo, Germany, received a pair of Elegant Pittas in 1999. In the *Avicultural Magazine*, Theo Pagel (2000) described how this pair bred there in 2000, and illustrated his account with colour photos of the nest, egg, nestling and first fledged youngster. Marc Damen notes that according to ISIS there were 1.1.1 at Cologne at the end of September 2001, "with one birth in 2001."

Banded Pitta *P. guajana*

Nykøbing, Denmark, acquired a pair of Banded Pittas in 1990. The pair produced four offspring in 1994, three in 1995 and two in 1998. As of September 2001, according to ISIS, there were 1.0.3 in the collection.

Vogelpark Walsrode, Germany, acquired three pairs in 1999. Marc Damen describes them as being of the nominate subspecies, but the *Vogelpark Walsrode Bird Inventory 2000* listed them as the Blue-tailed or Borneo Banded Pitta *P. g. schwaneri*. Damen states that three young were raised in 2000, but has no data for 2001. Dr Dieter Rinke informed me in an e-mail that he is currently preparing an article on the breeding of Banded Pittas at Walsrode, so we may learn more shortly.

Blue-winged Pitta *P. moluccensis*

(Treated sometimes, particularly in the past, as a subspecies of *P. brachyura*)

Alphen a/d Rijn in the Netherlands acquired two pairs in 1990. One female was exchanged for a male in 1992. Reproduction started in 1992, when five young were hatched but failed to survive. In 1993 two young were hatched but also failed to survive. In 1995 a male was acquired from Chester Zoo and another male from Frankfurt Zoo, but there was no further breeding. As of September 2001 the male from Chester was the only one still alive. It was acquired by Chester Zoo in 1987, so is at least 14 years old.

Frankfurt Zoo, Germany, acquired seven (5.2) Blue-winged Pittas in 1990. They started breeding in 1992, when six young were hatched, three

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Black-crowned Pitta *Pitta venustra* photographed at Vogelpark Walsrode in 1998

of which failed to survive. The following year four were hatched but failed to survive and in 1994, six were hatched, of which four failed to survive. The surviving offspring were sent to Hong Kong, Alphen and Leipzig. In 1998 five were hatched, three of which were reared and one sent to Krefeld. As of September 2001 a total of three (2.1) were living at Frankfurt Zoo, consisting of a pair acquired in 1990 which was therefore at least 11 years old, and one of the pair's 1998 male offspring.

Walsrode had several of these pittas in the 1990s but by the end of 2000 only one male remained.

Hooded Pitta *P. sordida*

Alphen a/d Rijn acquired five Hooded Pittas in 1999, three from a Dutch dealer and two from Arnhem, where they were bred in 1998. As of September 2001 it still had four (0.2.2).

Burgers' Zoo, Arnhem, the Netherlands, acquired four pairs of Hooded Pittas in 1997. They started breeding the following year when no less than 23 offspring were produced, of which about half had disappeared after some six months. Others were caught and sent to Alphen a/d Rijn (2), Bristol Zoo (3) and Rotterdam Zoo (5). During 1999 a further 21 were bred, but again most of them disappeared. The single youngster that could be caught was sent to Rotterdam. In 2000 a total of 22 young were seen, of which two pairs were caught and sent to Chester Zoo. As of September 2001, at least 19 had to date been bred that year, of which 5.3.4 had been caught and 4.2.2 were available to collections with a serious interest in breeding this species. According to a later report (*Avicultural Magazine* Vol.108, No.11. p.43 (2002)) 26 was the eventual number of young bred, of which just three failed to survive.

Bristol Zoo, UK, had as of September 2001 a pair of Hooded Pittas, both birds having been bred at Burgers' Zoo, the male having been sent originally to Chester Zoo. Hooded Pittas bred at Bristol Zoo in 1999, but only one young one was reared successfully and in 2000 was sent to London Zoo in exchange for an unrelated female.

Budapest Zoo, Hungary, had as of September 2001 one bird of which the sex was unknown.

Chester Zoo, UK, has no Hooded Pittas currently, neither has London Zoo or Hamburg Zoo, Germany.

Dvur Kralove in the Czech Republic had this species nest in 2000 and 2001, but the four young failed to survive. As of September 2001 it was left with 1.0.1 Hooded Pittas.

Cologne Zoo, Germany, had as of September 2001, according to ISIS, 0.0.2 Hooded Pittas.

Leipzig Zoo, Germany, has one *P. s. cucullata* sex unknown, having lost another at the end of 2000.

Rotterdam Zoo had at September 2001, a female Hooded Pitta from Burgers' Zoo, the male having died shortly after arriving there.

Walsrode had according to the *Vogelpark Walsrode Bird Inventory 2000*, 2.5.1 *P. s. muelleri*, at the end of 2000. It also had a pair of *P. s. cucullata*, which it acquired in 1999 and that nested the same year, but the offspring died.

Warsaw Zoo, Poland, has a pair of Hooded Pittas.

Wuppertal Zoo, Germany, acquired 2.1 *P. s. muelleri* in 1993 that made several breeding attempts but never managed to raise any young. As of September 2001 it continued to keep 2.1 *P. s. muelleri*.

Marc Damen believes that the Hooded Pitta is the only species of pitta that, if managed carefully, may have a long term future in EAZA collections.

Blue-crowned Pitta *P. soror*

Alphen a/d Rijn acquired 1.2 Blue-crowned Pittas, the male of which died in 1998, leaving it with, as of September 2001, according to ISIS, the two females.

Black-crowned or Graceful Pitta *P. venusta*

Alphen a/d Rijn had as of September 2001, according to ISIS, one Black-crowned Pitta, another having died in 1999, two years after arriving there.

Walsrode had according to the *Vogelpark Walsrode Bird Inventory 2000*, one bird listed as a Graceful Pitta, at the end of 2000. It is presumably the same bird as that in the photograph taken there in 1998.

References

Erritzoe, J. and Erritzoe, H. 1998. *Pittas of the World A Monograph on the Pitta Family*. The Lutterworth Press, Cambridge, UK.

McKelvey, S.D. amd Miller, B.W. 1979. Breeding the Giant Pitta at the San Antonio Zoo. *Avicultural Magazine* 85,3:109-111.

Pagel, T. 2000. Notes on keeping and breeding the Elegant Pitta *Pitta elegans*. *Avicultural Magazine* 106,4:165-169.

Acknowledgements

My thanks to Marc Damon for allowing me to freely make use of information in *Pittas (Pitta spp.) in Europe, summarized as of 30 August 2001*. Marc Damen can be contacted at: Burgers' Zoo, B. V. - Schelmseweg 85, 6816 SH Arnhem, Netherlands. Tel: (026) 4 42 45 34/Fax: (026) 4 43 07 76/ E-mail: m.damen@burgerszoo.nl

Footnote

Daniel Shearing has drawn my attention to Breeding the Hooded Pitta *Pitta sordida* by Bob Beeson, published in *Foreign Birds* 65,4:152 (Winter 1999). The first nest contained four eggs, three of which hatched only for the chicks to be ejected. The second clutch also contained four eggs of which only one hatched and the chick was found dead 14 days later. The third nest contained five eggs all of which hatched. Three chicks died within the first week. One of the remaining two left the nest on the 13th day and the other on the 15th day. One died on the 18th day; the other was reared successfully and could fly at 20 days and was seen feeding itself at 30 days.

THE PRESIDENT'S GARDEN PARTY 2001

by Stewart Pyper

The President's Garden Party 2001 was held on Sunday, July 15th, once again by kind invitation of our President Miss Ruth Ezra and Vice President Raymond Sawyer. Almost 80 members and their guests journeyed to Cobham, including several who were there for the first time. The weather in England last summer was variable, so we were fortunate that on the day of our visit, except for a few spots of rain early in the afternoon which sent members and their guests hurrying to get macs and umbrellas, the weather was pleasant, though the temperature was below average.

One of the changes that had taken place since our last visit is that the lakeside aviary has a new walkway (to do this a hedge has been removed) and this makes viewing the birds much easier. The aviary houses Superb Starlings, melanistic Stella's Lorikeets, Scarlet Ibis, Swainson's Jays and a Collared Jay. Raymond was warned that Swainson' s Jays can be particularly dangerous when approaching breeding condition and will attack even pheasants.

The aviary which used to house the Red-billed Choughs now houses a pair of Southern Ground Hornbills. We were surprised to see them as we do not normally associate Raymond with keeping hornbills. When first acquired the pair had damaged the wire netting but by the time of our visit had settled in. The four aviaries in the paddock have been rebuilt and there are separate pairs of Red-billed Choughs in three of them. All three pairs built nests but went no farther, having been moved there only just before Easter. It is hoped they will breed successfully this year.

At the time of our visit, Avocets, Black-necked Stilts, Green Woodhoopoes, Red-billed Choughs and Pink-necked Fruit Doves had bred. The latter is believed to be either the first or second UK breeding of the Pink-necked Fruit Dove. After seeing those at Cobham, Rosemary Wiseman expressed doubt about whether her birds, which bred earlier, are the same species that Raymond has bred.

In the tropical house a pair of Spangled Cotingas built a 'nest' on one of the girders. The use of inverted commas is because it was such an awful attempt at nest building. The single egg failed to hatch. Some members may recollect that for many years Raymond had two male Purple-throated Fruit Crows. He now has a pair that has carried nesting material but has yet to build a nest. The two have an aviary to themselves, that has a heated shelter into which they are shut on all but the warmest summer nights. The pair of Toco Toucans looked lovely and Raymond had found a mate for his remaining Keel-billed Toucan.

The colony of eight Carmine Bee-eaters, that had been put outside in the waterfall aviary in early June, was a magnificent sight. The birds respond to Raymond's call to be fed mealworms, which he throws up into the air and they catch. It is an incredible sight to see in a Surrey garden. As we were about to leave they were swooping to catch insects over the pool. We also saw Blue-bearded, Red-bearded and White-throated Bee-eaters. The Chestnut-collared Kingfisher sat motionless the entire time I spent in the six indoor flights in which I can recall seeing wood swallows, niltavas, Red-headed Tits, Hooded Pittas, Purple Honeycreepers, various sunbirds and tanagers, and a male Ruby-Topaz Hummingbird, that obliged us by flying about so that we could admire its iridescent plumage.

Barbary Shrikes or Yellow-crowned Gonoleks were seen, as were several pairs of Bartlett's or Mindanao Bleeding Hearts, the old pair of African Pygmy Geese, Roulroul Partridges, numerous starlings including the Golden-breasted or Royal, Fairy Bluebirds and at least three Blue-winged Mountain Tanagers. In 2001 the Blue-bellied Rollers failed to rear their young.

During tea Prof. J. R. (Bob) Hodges, one of our Vice Presidents and a former Hon. Editor of the magazine, thanked Ruth and Raymond for their wonderful hospitality and great generosity in donating approx. £550 (US$800), the proceeds of ticket sales, to the society's funds.

As always there was so much to see and admire, including the tortoises, some very impressive Koi, lots of bonsai and, of course, the beautiful gardens and all the other plants. If you have not yet visited Cobham, or it was some time since your last visit, may I suggest that you make an effort to join us there this year on Sunday, July 14th.

Whilst looking through some back issues of the magazine for a member, I came across the following notice attached to the July 1926 issue.

GARDEN PARTY AT FOXWARREN PARK

"This was to have been held on 15th May, but was postponed on account of the strike. It is now to take place on Saturday, 24th July, and Mr. and Mrs. Ezra have most kindly invited members of the Society to attend."

"A char-a-banc will leave no.17 Knightsbridge (two doors west of Hyde Park Tube Station) at 2.15pm, punctually, and all who intend to be present are requested to notify the Hon. Secretary, Miss Knobel, 32 Tavistock Square, W.C.1. Not later than 19th July."

The strike referred to was the General Strike of 1926 and a char-a-banc (pronounced sharabang) was an old-fashioned motor coach. It was the first year of Alfred Ezra's Presidency of the Avicultural Society and it is possible that last year's visit to Cobham was the 75th Anniversary of the first visit.

THE SOCIETY'S VISIT TO CHESTER ZOO

by Stewart Pyper

The society's Spring Social Meeting at Chester Zoo was postponed because of the outbreak of foot and mouth disease in the UK, and members and their guests visited the zoo eventually on Sunday, September 2nd 2001. The arrangements were made by council member Dr Roger Wilkinson, General Curator: Higher Vertebrates and Research at Chester Zoo. Some areas of the zoo continued to be off-limits, including the Asian Elephant House in which a pair of Great Hornbills is housed, otherwise all of the birds were on view. As Bird Notes from Chester Zoo, 2001, written by Roger, appeared in the previous issue (*Avicultural Magazine* Vol.108, No.1, pp.24-31), I will limit my notes to certain birds.

The highlight perhaps was seeing the four young Blue-winged Kookaburras with their proud parents. This species is smaller than the more common Laughing Kookaburra and more colourful. A constant stream of visitors was walking past the aviary but the birds remained unconcerned. Roger said that this species has been bred at Dublin Zoo, but the success at Chester is almost certainly a UK first breeding.

The Islands in Danger exhibit is an aviculturist's delight. We were able to view the pair of Red Birds of Paradise that came from Bronx Zoo, New York. Still not yet in adult plumage, the pair are the only birds of paradise on show here in the UK. Occupying the floor of their flight is a pair of Green-naped Pheasant Pigeons, that blended very well with the vegetation. Another flight houses a pair of rare St Lucia Amazons, which would not come forward to be viewed. A third flight houses a pair of Stella's Lorikeets and a White-collared Kingfisher, as well as a pair of White-naped Pheasant Pigeons. The aviaries extend right up to the roof and viewing was very good. An enclosure away from the birds houses a Komodo Dragon.

It is always an interesting experience to visit the Tropical Realm in which a large number of birds inhabit the free-flight area and others are housed in enclosures within it. Both Great and Rhinoceros Hornbills have large flights but have yet to reward their keepers by reproducing successfully. Tarictic Hornbills had reproduced and we were taken behind the scenes to view on a television monitor young in the nest-box, filmed by a camera placed in the top of it. It is hoped that this camera and those placed in other hornbill nest-boxes will provide valuable information about their nesting behaviour from which lessons can be learnt. A Vietnamese Pheasant chick had been raised successfully for the first time at Chester Zoo.

The colony of Humboldt Penguins had been allowed to produce a large number of young in order to provide birds for the new exhibit at Emmen

Zoo in the Netherlands. Some years the number has been limited to just one or two because Chester birds are already well represented in the EEP population. We met Karen Davies, the zoo's most experienced penguin keeper, who in 2000 went to South Africa to help care for the many thousands of penguins rescued following the oil spill disaster there.

Chester Zoo's record with flamingos is excellent and it was a joy to view the wonderful colony of perhaps a 100 or so Caribbean and Chilean Flamingos. Europe on the Edge houses a vast collection of birds, including White Storks which had reared two young. I also saw Condor Cliffs, the Andean Condor exhibit, which Roger wrote about in the *Avicultural Magazine* Vol. 103, No.1, pp.1-3 (1997). It is just one of a number of new exhibits that had been built since our previous visit in July 1996.

Roger was especially pleased that the zoo had bred two Red-tailed Amazons and had again been successful with the Mount Apo Lorikeets. He explained that some of the older parrot aviaries are due to be replaced soon, showed us the Bat House and the latest addition at Chester - the Jaguar Exhibit - sponsored by Jaguar Cars now part of the Ford Motor Company. It was due to be officially opened a few days after our visit. Our thanks go to Roger, General Curator: Operations, Mark Pilgrim, Team Leader, Wayne McCloud and other members of the staff who showed us around and answered the many and varied questions asked of them.

THE SOCIETY'S SECOND VISIT TO THE NATURAL HISTORY MUSEUM

by Stewart Pyper

On Tuesday, October 30th 2001, the society visited the Ornithology Department of the Natural History Museum at Tring. It was our second visit. A report on the first visit appeared in Vol.104, No.3, p.133 (1998). Dr Prys-Jones made the arrangements for our visit and welcomed us. Only when one visits the museum does one appreciate the size of the collection, which was moved to Tring from South Kensington, London, in the 1960s.

It has over one million specimens of about 95% of the known bird species, and is the third largest skin collection in the world. It also has about one million eggs, 17,000 specimens preserved in spirit, over 14,000 skeletons and 2,000 nests. There is a wealth of historical material collected by naturalists including Audubon and Darwin.

The library is fantastic and we were privileged to be able to view volumes by Gould and Lear, and the original plates painted by Commander A. N. Hughes for a special edition of Smythies' *Birds of Borneo*. Viewing some

of the magnificent hand-coloured plates in Gould's *Monograph of the Trochilidae* (Hummingbirds), we could only marvel at the way the wonderful iridescent plumage was portrayed. We thought the Purple-throated Carib especially outstanding.

Mark Adams is in charge of the bird skins and showed us a tray containing Darwin's finches, whose differences played such a vital role in the formulation of Darwin's theory of evolution. We were also shown a selection of blue macaws, including Lear's and Spix's. All skins are tagged with a label stating when, where and who collected them. It would have been wonderful to have spent more time examining the skins and noting the great names from the past, who played such an important part in the assembling of this great collection. It could be said that every label tells a story.

The planned two hour tour turned out to be two and three-quarter hours long, as various questions were asked of Robert Prys-Jones and his colleagues Mark Adams, Jo Cooper, Michael Walters (who has worked there with eggs and nests for over 30 years) and Alison Harding the librarian.

The Bird Group has offered to help members whenever possible, and any enquiries should be addressed to: The Bird Group, Dept. of Zoology, The Natural History Museum, Akeman Street, Tring, Herts. HP23 6AP. Tel:0207 9426158/Fax:0207 9426150/Email:rpp@nhm.ac.uk The same means should be used to contact the museum should any member have material such as dead birds or eggs, which he or she think may be of interest to the museum.

Visits are normally restricted to those whether amateur or professional, engaged in original research or the production of artwork intended for publication. The society hopes to arrange another visit in three or four years' time. If you missed this and the previous visit, I suggest that if we are fortunate enough to be invited back again, you make sure that you attend.

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AVICULTURAL MAGAZINES BACK ISSUES

A large stock is available including some early issues. Further details are available from: Hon. Secretary/Treasurer, The Avicultural Society, P.O. Box 47, Edenbridge, Kent TN8 7WP, UK or e-mail:lee.palm@virgin.net

LETTERS TO THE EDITOR

Nigel Hewston writes: In his interesting article on laughingthrushes in Vol.107, No.4, pp.152-156 (2001), Philip Schofield touched on their interactions with other species in aviaries. When I first encountered this group the only species regularly available was the White-crested, which was, like the Greater Necklaced, recognised as an unsuitable companion for smaller birds. A number of the smaller species available more recently have often been housed, and in some cases bred, with smaller species with few problems (though they can sometimes be aggressive to larger birds such as turacos), but recent experiences with a pair of Black-faced *Garrulax affinis* will lead me to be very cautious about mixing laughingthrushes in the future.

I received five of these birds last May among a number of birds I had agreed to house for another member while he rebuilt his aviaries. One pair was housed in a small aviary with no other birds in it, a second pair went into a large aviary with a range of smaller birds, and a single female was put into another mixed flight. Neither pair bred, and in the autumn the pair that had been housed alone was moved into an aviary containing pairs of Omei Shan Liocichlas *Liocichla omeiensis* and Rufous-winged Fulvettas *Alcippe castaneiceps* and a male White-tailed Robin *Cinclidium leucurum*. Following the moult this pair seemed to appreciate the larger aviary and really came into condition, by December behaving as I would expect birds to behave in March or April, but with no obvious aggression shown towards the other birds. You have no doubt guessed what comes next and may be thinking that housing laughingthrushes with fulvettas is pretty silly anyway, but these birds had been housed with fuvettas and other small birds in a much smaller aviary over a long period before they came to me, with no problems.

During a period of cold weather in January I found a fulvetta dead and partially eaten. With no aggression observed and not having seen both fulvettas for a few days in the well-planted aviary I assumed the bird had succumbed to weather or disease and then been partially eaten by mice or by the laughingthrushes, which spent a lot of time foraging on the aviary floor. However, a week or so later I found the robin dead. I knew that this bird had been alive and well the day before, and on checking thoroughly (as I had on the first occasion) and failing to find any signs of mammal entry it was obvious that the laughingthrushes were to blame. They had not just killed but also eaten the bird very efficiently, leaving the skeleton completely stripped but in one piece complete with tail and flight feathers, the only damage being a large hole in the back of the skull. The laughingthrushes were isolated in another aviary and three months later there have been no more losses.

The other three birds have caused no problems, even though the second

pair was carrying nesting material in February. I suspect that this species will prove to be an early breeder, though I won't be finding out as I'm relieved to say they are going home very soon, though they are lovely birds which I would be very happy to keep had I room to house them alone. I suppose this tale is just a reminder of how dramatically birds' behaviour can change when they come into breeding condition. The fulvettas are amazingly hardy for such tiny birds, this was their fifth or sixth winter outdoors (though their first with me). They fledged chicks last year and the survivor is still very fit.

News & Views in the same magazine included mention of the breeding of the Verditer Flycatcher *Muscicapa* (or *Eumyias*?) *thalassina* at Paradise Park. There is a useful website on this species set up by one of the Avian Interest Groups of AAZPA (the American Association of Zoological Parks and Aquaria) which includes a comparison of the husbandry techniques of three successful breeders, and links to hand-rearing protocols for yuhinas and niltavas. A husbandry review viewable as a download from the site includes details of a successful breeding by Jim Collins in 1991, which is the earliest published UK breeding I have come across. The site can be visited at: www.csew.com/flycatcher, or if you go via the Riverbanks Zoo site, at: www.riverbanks.org/aig you can also access sites on a number of other bird groups.

* * *

INCREASE IN THE NUMBER OF MACAWS

The number of Lear's Macaws *Anodorhynchus leari* is slowly increasing in the small area of north-eastern Brazil to which this species in endemic, thanks to the efforts of many individuals and organisations, including BioBrasil, the IBAMA, local landowner Fundação Garcia D'Ávila and the World Parrot Trust. A survey early last year recorded 246 birds, an increase of more than 30% since the previous survey in the late 1990s when 170 were seen.

The Disney Conservation Initiative has recently made a substantial donation towards the conservation of this splendid macaw. This money will be used for ongoing habitat creation through growing more Licuri Palms, the nuts of which are an essential food source for the macaws, the protection of nest sites and for continuing work compiling a photographic record of each individual bird.

BOOK REVIEWS

PIONUS PARROTS

When I was asked to review this new book, I was rather hesitant at first, as I thought "another book on parrots" - but I was pleasantly surprised for Rosemary Low's latest book as its title states is solely about the Pionus group of parrots. It gives details of all Pionus species and includes subspecies. Over the years Rosemary has kept or had in her care all of the parrots in this group. I can recall seeing her pair of Massena's that at the time was the only pair I knew of in the UK and still have the slide that I took of the pair. She also recalls Raymond Sawyer's mutation Pionus which he had at Cobham that often caused auguments as to which species it was!

The chapter titled Care and Housing has good advice on building aviaries, floor coverings, etc. Diet and nutrition covers seed mixtures, pulses, fruits, vegetables and greenfoods suitable for these birds. Rosemary also gives a good rearing diet and, finally in this section, mention is made of vitamin A which is a must to help avoid E. coli and aspergillosis infections. In the early days a number of Pionus were sadly lost to aspergillosis because of the lack of information available then.

The chapter on breeding for a change hardly mentions incubation and hand-rearing, but does give egg weights and lengths of incubation, as well as chicks' growth rates. The one thing that I always avoid regarding nest-boxes is screwing pieces of wood on the inside to act as a ladder for the female to climb up and down. I always glue my pieces of wood (using wood glue) to avoid, as happened many years ago, a youngster loosing an eye on a screw that was protruding, after the female has chewed the wood away.

The chapters titled Pets and Health Care are very informative, and suggest ways to occupy birds with things they can chew and play with. In the Wild gives details of habitat, food and the status of each species. Finally all the species are dealt with separately, with a description of each species and subspecies, as well as a distribution map for each species.

Pionus Parrots by Rosemary Low, published by Dona, has a soft cover, 78 pages and 24 colour photographs and is a book I can fully recommend. It is priced £11.95 including postage and is well worth it. It is available from leading avicultural booksellers and from Rosemary Low, P.O. Box 100, Mansfield, Notts. NG20 9NZ, UK.

Cliff Wright

PHEASANTS, PARTRIDGES & GROUSE

Sub-titled *A Guide to the Pheasants, Partridges, Quails, Grouse, Guineafowl, Buttonquails and Sandgrouse of the World*, this the latest of the Helm Identification Guides covers 253 species including the Australian Plains-wanderer. The main authors are Steve Madge, author of two earlier Helm Identification Guides, *Waterfowl* and *Crows and Jays*, and Phil McGowan Conservation Director for the World Pheasant Association (WPA).

There are 72 colour plates which appear to illustrate all 253 species and show the male (an exception is Hoogerwerf's Pheasant (which may prove to be a subspecies of Salvadori's Pheasant) of which only the female has been formally described), female, juvenile and subspecies when appropriate. The plates are the work of Norman Arlott, Robin Budden, Daniel Cole, John Cox, Carl D'Silva, Kim Franklin and Daniel Mead. There is variation in their styles, with the work of some of them being more pleasing than that of others.

The 253 species accounts include most of the information one expects to find in such an identification guide. There are alternative names, features that help distinguish the species from similar looking birds, a description of the adult male, adult female and juvenile, followed by a description or descriptions of any subspecies (under the heading Geographical Variation); measurements and weights are also given. There is a description of each species' habitat, its voice, habits, breeding behaviour, distribution, status, and the reference sources are cited at the end of each species account.

Of most interest to aviculturists are likely to be the species descriptions and those of subspecies along with the breeding data, which include the clutch size, description of the eggs and length of incubation of each species. When this is unknown in the wild, information from captive breeding is given, if known. References sources include the *Avicultural Magazine*.

The birds covered in this guide belong to some of the most threatened of all avian groups. The authors note that a recent assessment of the status of the pheasants considered no fewer than 50% to be at risk of extinction. The part dealing with the status of each species is often quite extensive and based on recent information. It makes interesting reading and is the part I am sure I will refer back to most frequently.

Pheasants, Partridges and Grouse by Steve Madge and Phil McGowan with Guy M. Kirwan (488 pages), published by Christopher Helm, London, has a recommended retail price of £45. The fact that it covers such a wide range of species will undoubtedly make this guide especially attractive to aviculturists interested in such birds.

Malcolm Ellis

THE SOCIETY ADOPTS A PAIR OF HORNBILLS

The Avicultural Society has adopted a pair of Bushy-crested Hornbills *Anorrhinus galeritus* living in the wild in Thailand. It has done so through the Hornbill Research Foundation (HRF) in Bangkok, which administers this very successful project in and around Budo-Sangai Padi National Park in the south of the country.

Local villagers, some of whom may have been poachers who sold hornbill chicks in the past, receive payment for protecting the nests and collecting valuable data for HRF researchers. Following the breeding season, the nesting results are sent to each individual donor. They also receive photos of their hornbill or hornbills at the nest, a photo of the villager who observed their particular family and photos of some of the types of food that the male hornbill brought to the nest. The nesting results and photos of our pair of hornbills will be available later in the year and it is hoped to publish these in the magazine. Further information about the HRF and its nest adoption programme can be found by visiting the Coraciiformes TAG website: www.coraciiformestag.com/ and clicking on to the link to the HRF.

The decision to adopt a pair of hornbills, and to also look into making a donation towards helping to fund research on the Yellow-throated Laughingthrush in China, was taken by the council at its recent meeting. It followed the earlier decision to donate money, from time to time, towards conservation and research and other worthy causes. As an example of the latter, a donation was made to the NCA (National Council for Aviculture), towards funding its representation to government on the proposed Animal Welfare Bill.

The amount of money available for such donations is quite small, so any donations will of necessity be fairly small and the projects will be chosen with great care, and preferably be aviculture related. We hope these plans have the support of the majority of members and those making donations to the society will in future indicate whether they wish all or part of their donation to go towards funding conservation and research. Any person or organisation wishing to be considered for help with funding should in the first instance send details to the Hon. Editor.

* * *

IS IT A FIRST?

Martin Vince, Assistant Curator of Birds, Riverbanks Zoo and Garden, South Carolina, USA, has e-mailed to say that the zoo has bred a Blue-winged Leafbird *Chloropsis cochinchinensis*, and wonders if anyone has bred this species before?

NEWS & VIEWS

GREATER SUCCESS

Greater Bird of Pardise *Paradisaea apoda*, Red Bird of Paradise *P. rubra*, Kagu *Rhynochetos jubatus* and Madagascar Crested Ibis *Lophotibis cristata* were bred during 2001 for the first time at Vogelpark Walsrode, Germany. Great Blue Turaco *Corythaeola cristata* hatched chicks, one of which was found dead after approximately 24 days, but it was not reported if the others were reared to independence. It was also reported that Andean Cock-of-the-Rock *Rupicola peruviana* had laid an egg.

* * *

SPIX'S MACAW UPDATE

It was reported (*Cyanopsitta* No. 63, p.8, December 2001) that the Brazilian environmental authority, the IBAMA, has requested that the Loro Parque Fundación transfer one of its two female Spix's Macaws *Cyanopsitta spixii* (held with a single male at the LPF parrot breeding centre) to Mauricio dos Santos' collection at Criadero Chaparral, Recife, Brazil. It has also requested the transfer of a female from Roland Messer's collection in Switzerland to Saõ Paulo Zoo in Brazil, and that of a male from Saõ Paulo Zoo to Roland Messer's collection. This will establish three new pairs. The above would seem to suggest that Saõ Paulo Zoo presently has at least two Spix's Macaws, rather than the one reported in the previous issue (*Avicultural Magazine* Vol. 108, No.l, p.45).

* * *

SOUTH OF THE BORDER

More than 300 species, over 80% of North American migrant bird species, winter in Mexico. To help assess the status of some of these and some resident Mexican species, Cornell Laboratory of Ornithology has appointed Dr Eduardo Iñigo, a prominent and respected Mexican ornithologist and conservationist, to compile statistics on the number of wild birds captured there for the cage bird trade. Concern centres mainly around parrots and finches, such as the Painted or Nonpariel Bunting *Passerina ciris* - a favourite with Mexican trappers - which has declined by 60% in the USA during the past 35 years. He will attempt to document the extent of this trade and its potential effect on the species' overall decline and help determine how this trade should be regulated both nationally and internationally.

SECOND GENERATION

Ian Hinze has phoned to say that despite having moved house and had builders working in his new home for months, he has succeeded in breeding his Mali or Kulikoro Firefinches *Lagonosticta virata* through to the second generation, and as so to confirm the breeding, in the background the young could be heard being fed by their parents.

* * *

PLANTAIN-EATER PREFERS WILLOW-HERB

To date 14 Western Grey Plantain-eaters *Crinifer piscator* have been raised at the Cotswold Wildlife Park, Oxon. The first nine chicks failed to survive past 12 days and others have also been lost. It has been noticed that it is only when the parents have access to Rose-bay Willow-herb *Epilobium angustifolium* growing in the aviary on which to feed (along with a variety of other plants and whole lettuce spiked on branches), that they succeed in rearing their young successfully. The Cotswold Wildlife Park achieved the second breeding of this West African species in the UK, the first breeding being credited to F. Tamms in 1989. One kept at London Zoo in the late 1950s was very fond of the leaves of hawthorn *Crataegus* sp.

* * *

A LONG LIST OF SUCCESSES

Species bred at San Diego Zoo and San Diego Wild Animal Park during 2001 included a Cardinal Lory *Chalcopsitta cardinalis*, nine Blue-crowned Lory *Vini australis*, three Pesquet's Parrot *Psittrichas fulgidus*, two Double-eyed Fig Parrot *Cyclopsittta diophthalma*, three Horned Parrakeet *Eunymphicus cornutus*, three Great Blue Turaco *Corythaeola cristata*, nine White-fronted Bee-eater *Merops bullockoides*, two Purple or Rufous-crowned Roller *Coracias naevia*, three Racquet-tailed *C. spatulata*, seven Blue-bellied *C. cyanogaster*, six Bearded Barbet *Lybius dubius*, five Boehm's Barbet *Trachyphonus darnaudii boehmi*, three Malaysian Long-tailed Broadbill *Psarisomus dalhousiae psittacinus*, four Guianan White-bearded Manakin *Manacus manacus*, one Spangled Cotinga *Cotinga cayana*, two Collared Finchbill *Spizixos semitorques*, four Ruby-throated Bulbul *Pycnonotus melanicterus dispar*, two Orange-bellied Euphonia *Euphonia xanthogaster*, two Turquoise Tanager *Tangara mexicana*, seven Metallic Starling *Aplonis metallica*, two Golden-breasted Starling *Cosmopsarus regius magnificus*, two White-breasted Wood Swallow *Artamus leucorhychus amydrus*, three Superb Bird of Paradise *Lophorina superba feminina* and a Magnificent Bird of Paradise *Diphyllodes magnificus hunsteini*.

RECORD NUMBER OF YOUNG REARED

A grand total of 1,104 young were raised in 2001 at Loro Parque, Tenerife, a 30% increase on the previous record of 853 young reared there in 2000.

Twenty-six species and subspecies of lory produced 90 chicks. These included five rarely bred Cardinal Lories *Chalcopsitta cardinalis*. Musk Lorikeets *Glossopsitta concinna* hatched eight chicks and the number of Yellow-bibbed Lories *Lorius chlorocerus* increased by four. The Emerald Lories *Neopsittacus pullicauda* hatched two chicks. Six Rosenberg's Lorikeets *Trichoglossus haematodus rosenbergi* were bred and three Johnstone's or Mt Apo Lorikeets *T. johnstoniae*, for which the Loro Parque Fundación holds the European Studbook. The fundación now has 16 of the latter. Two pairs of Blue-crowned Lory *Vini australis* hatched five young.

Fifteen species and subspecies of cockatoo produced 93 chicks. Most productive were the six breeding pairs of Major Mitchell's or Leadbeater's Cockatoos *Cacatua leadbeateri*. Moluccan Cockatoos *C. moluccensis* hatched 14 young and two pairs of Blue-eyed Cockatoos *C. ophthalmica* produced seven chicks, some of which were hatched in the hand-rearing station. Three Keas *Nestor notablis* were reared, bringing the Loro Parque population to 13. A group of nine young are currently exhibited in an aviary with some Galahs or Roseate Cockatoos *Eolophus roseicapilla*, and are a great attraction because of their hilarious behaviour.

All three species of fig parrot at Loro Parque nested successfully, with Edward's *Psittaculirostris edwardsii* raising five chicks. Great-billed Parrots *Tanygnathus megalorhynchos* hatched four young. With the ever increasing popularity of colour mutations of Australian parrakeets, Loro Parque is to be commended on its plan to build up normal or natural coloured populations of species such as the Scarlet-chested Parrot or Parrakeet *Neophema splendida*.

Fifteen Timneh Grey Parrots *Psittacus erithacus timneh* were raised and four pairs of Cape Parrots *Poicephalus robustus fuscicollis* produced a total of nine young. The breeding colony of Nyasa Lovebirds *Agapornis lilianae* produced 22 young. The Long-tailed Parrakeet *Psittacula longicauda* was bred for the first time at Loro Parque, with one youngster being reared to independence.

There was a considerable improvement in the number of macaws bred in 2001. One hundred and forty-eight young of 13 species were reared, including five Hyacinth Macaw *Anodorhynchus hyacinthinus*, Blue-headed Macaw *Ara couloni* and 11 Blue-throated Macaw *A. glaucogularis*. The five pairs of Blue-throated produced more young than ever before.

Forty-four Sun Conure *Aratinga solstitialis* were among the 113 young *Aratinga* conures of 12 species which were reared. Six Golden or Queen of Bavaria's Conures *Guarouba guarouba* were parent-reared. Two Thick-

billed Parrots *Rhynchopsitta pachyrhyncha* were parent-reared and an egg laid by a second pair was hatched in an incubator.

Following radical changes in nutrition, developed in collaboration with the veterinary department, five species and subspecies of *Bolborhynchus* parrakeets bred successfully. This included the first breeding at Loro Parque of the Andean Parrakeet *B. orbygnesius*. Two pairs produced a total of six young. Altogether 15 young caiques *Pionites* spp. were hatched and Loro Parque's first Short-tailed Parrot *Graydidascalus brachyurus*. Six Plum-crowned Pionus *P. tumultuosus* and 10 Coral-billed *P. sordidus crallinus* were among 29 Pionus reared.

Twenty species and subspecies of Amazon produced a total of 90 young. It included the first captive breeding worldwide of the Scaly-naped Amazon *Amazona mercenaris*. In a huge flocking aviary housing two pairs, one pair had a clutch of three eggs, two of which were fertile and from which two chicks were reared. Other species and subspecies bred included Yellow-shouldered Amazon *A. barbadensis*, Red-topped *A. rhodocorytha*, Festive *A. festiva bodini*, Red-spectacled *A. petrei*, Yellow-lored *A. xantholora* and Yellow-faced Amazon *A. xanthops*.

Purple-bellied Parrots *Triclaria malachitacea* produced seven chicks and Loro Parque now has probably the largest number of this species in captivity. The overall number of parrot species and subspecies in the collection has increased to 322.

Prof. David Waugh, who was the Loro Parque Fundación's first Scientific Director from 1995-1998, has left his post as Director of the Royal Zoological Society of Scotland to return as Environmental Advisor to Loro Parque and the LPF.

* * *

FALKLAND ISLANDS HAVE NEW OWNER

Frank Woolham reports that the Bronx Zoo-based Wildlife Conservation Society (WCS) has acquired ownership of the spectacular islands of Steeple Jason and Grand Jason, two of the western-most islands in the Falklands chain in the south Atlantic.

The islands were a gift from New York philanthropist Michael Steinhardt, a member of the WCS Board of Trustees. They support large populations of Rockhopper *Eudyptes crestatus*, Gentoo *Pygoscelis papua* and Magellanic Penguins *Spheniscus magellanicus*, Black-browed Albatross *Diomedea melanophrys*, Southern Giant Petrel *Macronectes giganteus*, Falklands Skua *Catharacta antarctica* and the rare Striated Caracara or 'Johnny Rook' *Phalcoboenus australis*.

Steeple Jason is more than five miles (approx. 8km) long and nearly one

mile (approx. 1.6km) wide, Grand Jason is almost seven miles (approx. 11km) long and approximately two miles across (approx. 3.2km). Steeple Jason's nesting population of more than 150,000 pairs of Black-browed Albatross is considered the largest in the world.

According to WCS Senior Conservationist, Dr William Conway, who has undertaken wildlife surveys of the islands, their vast bird colonies represent one of the remaining great wildlife spectacles left on earth - comparable to the wildebeest migration of the Serengeti and that of caribou in the Arctic region.

These two islands were once owned by the late Len Hill who established one of the first, if not the very first bird garden, the wonderful Birdland in the Cotswold village of Bourton-on-the-Water, Glos., here in the UK. The story of Birdland and the acquisition of the Steeple Jason and Grand Jason were described in his book, *Penguin Millionaire*. In News & Views (*Avicultural Magazine* Vol.77, No.2, p.77 (1971)), A. A. P. (Arthur Prestwich) reported that Len Hill had produced stamps for these two islands bearing his portrait and remarked that it was surely the first time a member of the society had been depicted on a stamp. Adding, that as the islands have no human inhabitants the stamps were useless for postal purposes, but were of considerable philatelic interest.

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IS THIS A RECORD?

I have been sent a cutting about a Blue & Gold Macaw *Ara ararauna* reputed to be 103 years old and to have been once owned by Winston Churchill, who is said to have taught it a few swear words, which the macaw still uses occasionally.

Believed to have been born in 1899, the macaw is said to have been acquired by a Mrs Stribling in 1900. Following her death in the 1930s, the macaw which is named 'Charlie', was sold to a Percy Dabner and the following year was bought by Churchill and took up residence at his country retreat at Chartwell, Kent, where he also kept his famous Black Swans *Cygnus atratus*.

Churchill is said to have had the macaw for 28 years, including when he was war-time Prime Minister, until his death in 1965, after which it was given to Percy Dabner's son-in-law Peter Orum, who had a pet shop. The past three years, the macaw which is badly plucked on the underparts, has lived at Peter Orum's Reigate, Surrey, garden nursery, which has enjoyed a large increase in visitors following the national and international media coverage the story has received.

NEW ARRIVALS AT MARWELL

Several new species have been added to the collection at Marwell Zoological Park in Hampshire. A group of 16 Black-cheeked Lovebirds *Agapornis nigrigenis* and a pair of Sun Conures *Aratinga solstitialis* have been received from Shaldon Wildlife Trust and four pairs of Sacred Ibis *Threskiornis aethiopicus* from the Cotswold Wildlife Park have joined Waldrapp *Geronticus eremita*, Black-crowned Night Heron *Nycticorax nycticorax*, Marabou *Leptoptilus crumeniferus* and spoonbill *Platalea* spp. in the park's Marabou Mansions aviary.

* * *

LOOKING FOR A MATE?

If you are looking for a mate to pair-up any un-paired birds you may have, why not post your requirements on the bulletin board of the society's website: www.avisoc.co.uk . Present requirements posted on the site, include two female Yellow-bellied Tits *Parus venustulus*, a female Red-billed Buffalo Weaver *Bubalornis niger*, a female Chopi Blackbird *Gnorimopsar chopi* and female Cinereous Finches *Piezorhina cinerea* and Mongolian Larks *Melanocorypha mongolica*.

* * *

GRAHAM TULK

Members and their guests attending the Spring Social Meeting at the Cotswold Wildlife Park were saddened to learn of the death of Graham Tulk and before lunch stood for a minute's silence. Graham had died suddenly of a heart attack earlier in the week. He was aged 60. Graham often attended social meetings and I remember following the visit to Michel Klat's wonderful collection at Hare Hatch, sitting opposite Graham and his wife during the sumptuous tea prepared for members and their guests by Diane Klat in the village hall, and Graham joking about having to forego the many cakes and other sweet things because he had been persuaded recently of the need to go on a strict diet.

A popular figure, Graham had, according to accounts, been an avid birdkeeper from a very early age and had in his time kept a wide and varied collection. Lately though he had specialised in breeding Australian finches, most notably some of the best Gouldian Finches in the UK, and had become increasingly interested in developing new colour varieties.

Our deepest sympathy is extended to his widow Sylvia and sons Robert and Stephen.

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