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## SUNNING BEHAVIOUR BY KORI BUSTARDS *Ardeotis kori* AT THE SMITHSONIAN'S NATIONAL ZOOLOGICAL PARK

by Nandita Fernandes and Sara Hallager

### Abstract

In this paper we examine the sunning behaviour of seven Kori Bustards *Ardeotis kori* over a period of 15 months at the Smithsonian's National Zoological Park in Washington DC, USA. We found that sunning was most prevalent when the temperature was between 50°F-90°F (10°C-32.2°C), between 10.00am - 1.00pm, during the months of August-October, when the ultraviolet index was between five and eight. At such times the birds showed preferences for particular areas and that birds sunned on average for eight to 12 minutes before moving to the shade to preen. We conclude that sunning is important for Kori Bustards to maintain good feather condition and zoos and other collections that exhibit this species should provide sunny areas in which their birds have the opportunity to exhibit this necessary feather maintenance behaviour.

### Introduction

Bustards are medium to large-sized terrestrial birds, that chiefly inhabit open plains in either arid or seasonally dry regions of the Old World. The largest species, the Kori Bustard is indigenous to grasslands and lightly wooded savannahs in eastern and southern Africa. The nominate subspecies *A. k. kori* occurs in Botswana, Zimbabwe, Namibia, southern Angola, South Africa and Mozambique (Johnsgard, 1991), while *A. k. struthiunculus* occurs from Ethiopia to north-west Somalia, south-east Sudan and north-east Uganda, south through Kenya to northern Tanzania (Clements, 2007).

An ethogram for the Kori Bustard has been developed (Lichtenberg & Hallager, 2007) but additional observations of birds in the wild are needed to supplement the descriptions. Sunning behaviour by Kori Bustards was observed at the Smithsonian's National Zoological Park (SNZP). Sunning

is behaviour in which a bird deliberately positions itself in the rays of the sun while often assuming a special posture (Simmons & Prytherch, 1986.). There are numerous theories on the function of sunning, ranging from it being a pleasurable stimulus connected with heat absorption, to it increasing the mobility of ectoparasites which can then be preened out, drying wet plumage, producing vitamin D, aiding moulting and increasing preen gland

Fig. 1. Sunning posture of Kori Bustards



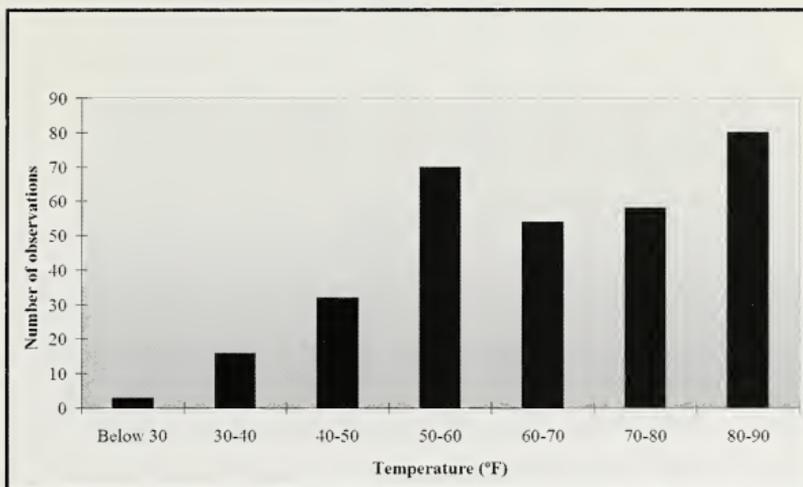
secretion (Kennedy, 1969). With Kori Bustards sunning occurs strictly on the ground with one or both wings spread out (Fig. 1). Sunning behaviour by Kori Bustards is examined by us in this paper with the aim of understanding the behaviour and its significance to the species. Because of the importance of sunning to captive Kori Bustards, we include it in guidelines for the management of these birds in captivity.

## Method

Observations at the Smithsonian's National Zoological Park commenced in June 2004 and concluded in September 2005. A total of 230 hours (122 hours in 2004 and 108 hours in 2005) was observed by one recorder, trained in Kori Bustard behaviour. Over the course of the study a total of seven adult birds (one male and six females) were observed three days a week from 11.00am-1.00pm. The hours of the study were determined by examining nearly 2,000 hours of observation data by volunteer Kori Bustard watchers during 2000-2005, which found that sunning occurred most often between 11.00am-1.00pm (Fig. 3). Data was not collected on days of precipitation or heavy cloud cover when sunning behaviour was unlikely to be observed. The exhibit consisted of nine quadrants each visually distinguished by physical markers such as bushes, trees and fence lines. Six of the seven birds were wild-caught and one was hatched in captivity. All the birds were fitted with coloured leg bands for identification purposes.

The observer stood in front of the exhibit and recorded behaviours using binoculars and the naked eye. A stopwatch was used to record the duration of the sunning behaviours. The ambient temperature was recorded prior to the start of each watch. The orientation, posture (wings tucked in or spread out) and the location of each bird were also recorded.

Fig. 2. Preferred sunning temperature from 11.00am - 1.00pm.



### Preferred orientation

The male sunned the most when he was facing west, whereas females sunned most when facing north.

### Preferred temperature

In our study which examined sunning behaviour between the hours of 11.00am-1.00pm, we found that four birds sunned most when the temperature was 80°F-90°F (26.7°C-32.2°C), while three birds sunned most frequently at 50°F-60°F (10°C-15.6°C) (see Fig. 2).

### Duration of sunning and posture

Birds sunned on average for eight to 12 minutes. The sunning posture, with wings spread, was observed 20% of the time. The most commonly observed posture was with the wings tucked in.

### Ultraviolet (UV) index

Sunning was most prevalent when the UV index was between five and eight.

### Preferred sunning locations

Although each bird showed a definite preference for a particular sunning

area, most birds occasionally sunned in other areas of the exhibit. Two areas of the exhibit were not used as sunbathing spots by any of the birds.

### Preferred sunning times and months

Using data collected from 2001-2005, we determined that birds prefer to sun from 10.00am-1.00pm (see Fig. 3), during the months of August-October (see Fig. 4), when the temperature is between 60°F-89°F (15.6°C-31.7°C) (see Fig. 5).

Fig. 3. Preferred sunning hours (2000 - 2005).

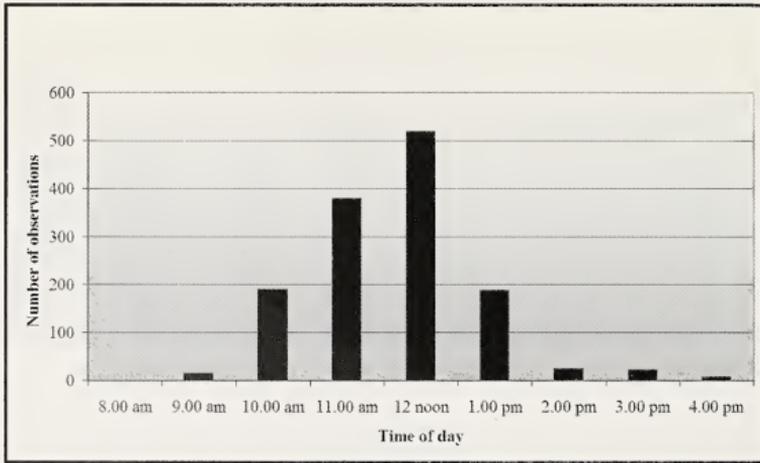
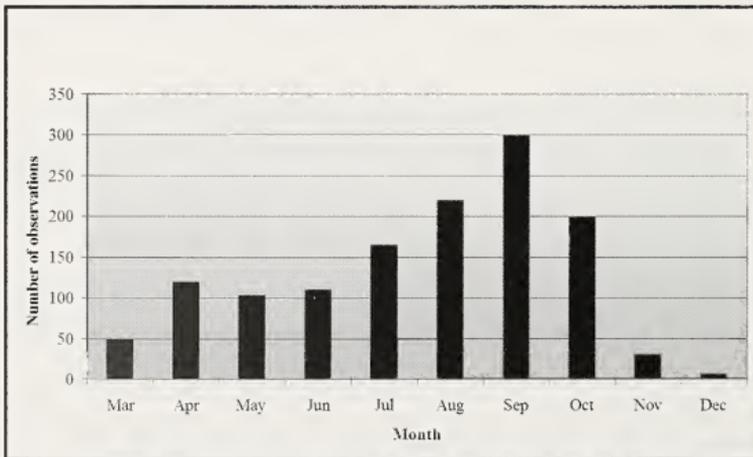


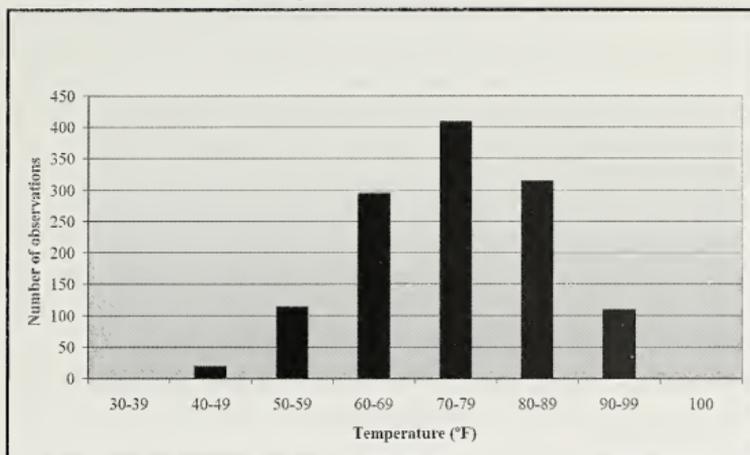
Fig. 4. Preferred sunning months (2000 - 2005).



### Discussion

Feather maintenance is crucial to the survival of all birds. Birds care for their feathers by frequent preening and other activities such as water bathing,

Fig. 5. Preferred sunning temperatures (2000 - 2005).



anting, dust bathing and sunning. Each of these behaviours, while not performed by all birds, have the function of helping maintain the plumage in top condition. Sunning, the behaviour by which a bird deliberately positions itself in the rays of the sun, according to hypothesis, increases the mobility of ectoparasites which can then be preened out, dries wet plumage, produces vitamin D, aids moulting and increases preen gland secretions (Simmons & Prytherch, 1986). Sunning behaviour has been reported in nearly 200 species (Simmons & Prytherch, 1986) including the bustard family Otidae. Kori Bustards as young as three weeks old have been observed sunning (Hallager pers. obs.).

As an adaptation to the arid environment in which they live, Kori Bustards have loosely packed feathers and lack a preen gland, producing instead powder down which helps waterproof their plumage. There are no reports of sunning behaviour by Kori Bustards in the wild. This may be due to the lack of observers, the short duration and/or infrequency of the behaviour, the ability of Kori Bustards to blend in with their surroundings while they are sunning, or the intensity of the African sun eliminating the need to sunbathe.

Our observations of captive birds, demonstrated that Kori Bustards at the SNZP, always sunned near a small bush or clump of grass, thereby successfully camouflaging themselves. Kori Bustards at the SNZP were observed sunning with one or both wings out four times less often than with their wings tucked in. Outstretched wings increase the body surface of the bird exposed to the sun, but may increase the likelihood of predation due to increased visibility. Sunning near a bush or clump of grass may limit the ability of a predator to detect the bird, but also probably decreases the ability

of humans to observe the behaviour in the wild. As there are no recorded observations of sunning by wild Kori Bustards with which to compare our findings, in our paper we focus on the possible functions of sunning by captive Kori Bustards and its importance to the overall management and welfare of Kori Bustards in zoos.

### **Orientation of the birds**

We found that the majority (six out of seven) of the Kori Bustards faced north when sunning. As sunning occurred primarily during the middle of the day in the warmer months when the sun was directly overhead, orientation to the north was of undetermined significance as the sun's rays fell strictly on the back of the birds (Hallager pers. obs.). We noted that the birds often turned one eye skywards. Simmons and Prytherch's (1986) hypothesis was that this may be a method of monitoring the position of the sun or an anti-predator precaution.

### **Preferred temperatures, UV and social activity**

Deliberate sunning behaviour is a strictly seasonal event in temperate climates (Simmons & Prytherch, 1986) and Kori Bustards at the SNZP clearly followed a seasonal pattern of sunning frequency. In common with Simmons and Prytherch (1986) and Stainton (1982), we found sunning occurred most often in direct sunshine, at the highest UV intensities, at the hottest times of the day, during the hottest months of the year and at favoured locations. Like Hauser (1957) and Simmons and Prytherch (1986), we noted that multiple birds sunned at the same time.

We noted that birds sunned the most when the ultraviolet (UV) index was between five and eight. The UV index is an international standard measurement of how strong the ultraviolet radiation from the sun is at a particular place on a particular day, with one being the lowest intensity level and 11+ the highest (US EPA). The UV index in Washington DC never exceeded eight during our study. In the wild, Kori Bustards are regularly exposed to UV indices of 11 or more, which may be high enough to keep ectoparasites in check, thereby eliminating the need to sunbathe.

### **Duration of sunning and preening**

We determined the mean sunning duration during our study to be eight to 12 minutes. This appeared to be enough time for the birds to derive maximum benefit from the sunning activity. Following a bout of sunning, birds moved to the shade and preened. The fact that Kori Bustards sunned when temperatures were at their highest and when UV indices were at their highest, lends support to the notion that sunning by Kori Bustards is related to feather maintenance and ectoparasite removal, as sunning did not occur during the winter months when feather mites would be predicted

to be minimal. The lack of sunning during the winter months negates thermoregulation as a reason for sunning by Kori Bustards.

However, Houston (1979) questioned the effectiveness of ectoparasite removal due to sunning. He argued that the small amount of time a bird is engaged in sunning is insufficient for the sun to penetrate the layers of plumage. Houston stated that the chief reason for sunning is to achieve optimum feather maintenance, purporting that it is the heat and its effect on the restoration of feather shape that is the reason for sunning. However, as Kori Bustards are infrequent and only short distance fliers, the importance of feather shape is not as critical to them as it is to birds that spend more time in the air. Hauser (1957) though explained that numerous birds have their feathers erect while sunbathing. This would result in greater exposure of the skin and serve to evict ectoparasites to the outer layers of the plumage, from where they could be removed by the bird. Erection of feathers by Kori Bustards was observed during this study, lending support to ectoparasite control being a plausible reason for sunning by captive Kori Bustards.

We often noted that birds sunned themselves to the point where they were panting heavily. Heavy panting continued for up to five minutes after they had moved into the shade (Hallager pers. obs.). Simmons and Prytherch (1986) and Blem and Blem (1993) suggested that remaining in the sun to the point of nearly overheating is an act that deliberately increases the body temperature in an effort to eradicate ectoparasites. Like Mueller (1972) and Kennedy (1969), we noted that birds habitually preened shortly after sunbathing.

### **Preferred sunning locations**

We determined that each bird had a particular location it sunned in. This could have been due to a variety of reasons, such as the camouflaging nature of certain bushes and shrubbery (Teager, 1967) or the territorial nature of the bird. Probably due to their shady nature, two areas of the exhibit were not used as preferential sunbathing spots by any of the birds. The vegetation in these areas was therefore thinned out and the birds have now been observed sunning in these locations (Hallager pers. obs.). We noted that two of the three most dominant birds in the group (the male and one of the two alpha females) sunned more than all the other birds in the study. The other alpha female sunned most often at the back of the exhibit in an area farthest away from zoo visitors. Blem and Blem (1999) mentioned the need of Violet-green Swallows *Tachycineta thalassina* to sunbathe at a particular site, even though there were various other locations available.

### **Conclusion**

Our study demonstrated that the act of sunbathing plays an integral role in the health and feather condition of captive Kori Bustards and suggests

that the control of ectoparasites is the most plausible cause of sunning by captive Kori Bustards. When designing exhibits for this species, areas of the enclosure that provide suitable areas for sunning during the middle of the day should be included in sufficient numbers to give every bird the opportunity to sunbathe. Areas of shade should also be provided so that the birds can move to these areas after sunning themselves. Additional observations are needed of birds in the wild to further elucidate the significance, frequency and occurrence of sunning by Kori Bustards.

### Acknowledgements

Our special appreciation is extended to Juliana Ohlrich for painstakingly and patiently contributing to the collection of data for this study. We are also grateful to the volunteer watchers who, from its inception in 2000, contributed their time and energy to the Kori Bustard behaviour watch at the SNZP. Without their dedication, many of our conclusions would not have been possible. Thanks are also extended to Sheila Franco for her assistance with data analysis.

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## MANAGING THE ORANGE-HEADED GROUND THRUSH *Zoothera citrina melli* AT PAIGNTON ZOO ENVIRONMENTAL PARK

by Jo Gregson

The genus *Zoothera* comprises 36 species, about half of which are considered to be threatened or vulnerable. They are characterised by their short tails and relatively long beaks, an adaptation for spending most of the day foraging under scrubby vegetation.

The Orange-headed Ground Thrush has 12 subspecies (Clements, 2007). *Z. c. melli* is the one most often available to aviculturists nowadays. It is easily identified by its two black face stripes and orange throat; *Z. c. cyanota* has the two face stripes combined with a white throat. Young birds can be sexed in the first year. The male's wings are slate grey in colour while those of the female are olive green. These are quite sociable though shy birds. Provided with the right environment though they will become confident and make ideal understory birds for mixed exhibits.

Here at Paignton Zoo we have two males and three females in our tropical house and these live happily together as a group. In addition we have 20 breeding aviaries behind the scenes, five of which hold individual pairs of Orange-headed Ground Thrushes. Each pair is separated from the next pair by another species such as the Chestnut-backed Thrush *Z. dohertyi* and Grey-backed Thrush *Turdus hortulorum*.

These off-show aviaries are of very simple construction and are easily managed without causing much disturbance to the occupants. Built on a concrete plinth, each aviary is 16ft long x 4ft wide x 7ft high (approx. 4.8m long x 1.2m wide x 2.1m high). They are in blocks of four. We also have smaller aviaries measuring 10ft long x 4ft wide x 7ft high (approx. 3m long x 1.2m wide x 2.1m high). Thrushes breed in both sizes of aviaries.

Each has a shelter directly opposite the keeper's access door. The shelters measure 4ft x 2ft 6in x 3ft 6in high (approx. 1.2m x 0.8m x 1m high) and are 3ft 6in (approx. 1m) above the floor. There is a small pop hole at the lower front centre with a landing ledge. The shelters are floorless, allowing the birds to enter and leave through the open bottom, which they often do. They were designed in this way to cut down on the amount of cleaning and the birds are more inclined to use a shelter from which they can easily escape.

Each aviary has a few high, straight perches and large amounts of scrubby vegetation. The floors of the aviaries are left bare all winter. Then just before the breeding season an abundance of nesting material is supplied, so that the floor of the aviary is covered with materials such as moss, leaves



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**Block of four off-show aviaries with a safety porch at the front and the shelters at the rear.**



© Jo Gregson

**Simple shelter with pop-hole at lower front centre and no floor.**

and dry grasses. This is replaced several times during the season. The nest pans measure 6in x 6in x 3in deep (approx. 15cm x 15cm x 7.5cm deep) and are similar to the containers used by supermarkets for mushrooms. Lower sided boxes have sometimes caused young birds to fledge prematurely. Breeding birds have never built in a bush, preferring instead to use the nest pans described above.

Heating is supplied by an electric tubular heater hung half-way up the back wall of the shelter. These measure 2ft (61cm) long and are of the type often used in greenhouses. A strip of ¼in (6mm) wire mesh is fixed a few inches (5cm or so) above the heater to prevent birds roosting directly on



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Approximately 11 days old.

top of it.

Food is placed in a dish hung high up at the front of the aviary. A piece of Perspex (Plexiglas) covers the feeding area. The diet consists of mixed fruits, Sluis, boiled egg and minced (ground) beef. The food is sprinkled with SA37 and a few mealworms are given to the birds each day. As the breeding season approaches, chopped pinkies are added to the diet and the number of mealworms is stepped up. When there are chicks in the nest, mealworms are scattered in the aviary several times each day. The mealworms are 'loaded' with cuttlefish bone, stinging nettles, dandelion leaves and bran.

They usually lay four eggs but sometimes there are just three. The incubation period is 14 days and the chicks fledge at about 12-14 days. Chicks selected for hand-rearing are removed from the nest at five to six days old unless there is a more immediate problem. They are kept in bowls lined with soft tissue to prevent splayed legs and are fed every 1½ hours on a diet of chopped pinkies and papaya (pawpaw). Water is given by syringe a couple of times each day. They are weaned after about 20 days and are then moved to a larger pen. They can be sexed at that time after the first moult. As we have not observed the adults driving them before this stage, chicks are removed from the breeding aviaries at about 30 days.

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## MIXED FORTUNES WITH THE CHESTNUT-BACKED THRUSH *Zoothera dohertyi*

by Jim Jerrard

I obtained a pair of 2006-bred unrelated Chestnut-backed Thrushes from my friend Gary Bralsford, who was first to breed this beautiful Indonesian thrush in 2003 (see *Avicultural Magazine* Vol.109, No.4, pp. 150-153).

In March when the male started to sing, I provided a couple of nest sites in their flight and in the second week of April the female started to build a nest, using dry grass and moss, and lined the cup with bits of paper, sisal and fibres. The nest was completed by April 18th and the first egg was laid on April 21st, followed by a second egg. One egg hatched on May 2nd but the chick died the same day. The other egg was clear. No further nesting attempts were made and the male stopped singing. There was heavy rain, wind and cold weather, but things continued to go well with my other birds, though I did lose a few chicks.

When the bad weather died away at the end of June, the male Chestnut-backed Thrush started to sing again and the female started to rebuild, but did not lay until August 11th. This time she laid a clutch of three eggs, two of which hatched on August 26th. The other egg was clear. The two chicks were reared on earthworms and crickets and fledged on September 8th.

On September 17th the female laid again. This time she laid a clutch of two eggs. One hatched on October 1st and the other the following day. By then though the days were getting shorter and the nights were getting longer and it was getting cold, it was not surprising therefore perhaps that the chicks failed to survive past the fourth day. Had they reached seven days old, I would have ringed (banded) them, as I had ringed the two earlier chicks, then hand-reared them, but it was not to be.

*The society supports a Special Interest Group for keepers and breeders of the Chestnut-backed Thrush. The UK contacts are Andrew Owen and Ian Hadgkiss - Tel:01296 653286/E-mail:Andrew.Owen@nationaltrust.org.uk*

## BREEDING THE GUIANAN TOUCANET *Selenidera culik*

by Bengt Larsson

The Guianan Toucanet is distributed in lowland forests from eastern Venezuela, through the Guianas to northern Brazil. It is common in the wild but rather scarce in aviculture. Before 1990 it was almost unknown in captivity. Jerry Jennings in California bred it for the first time in captivity that year. Subsequently he and other private breeders in the USA were successful several times with different pairs. In Europe I had until recently only found records of it having been bred by Leif Rasmussen, a private breeder in Copenhagen and at Aalborg Zoo, Denmark, both having raised eight to 12 young to independence in the 1990s. Leif Rasmussen kept a pair of the young through to the following year and unexpectedly the pair bred successfully in the birds' first year.

As small numbers were regularly imported into Europe during the past 10 years, I suspected that there might be others and earlier this year discovered that this species has been bred at Olomouc Zoo in the Czech Republic and arranged an exchange of birds. According to the ISIS website there are not many Guianan Toucanets kept in zoos, though many large collections are not on the ISIS website.

The species of the genus *Selenidera* are unusual among members of the toucan family in showing marked sexual dimorphism, a characteristic they share with four species of the genus *Pteroglossus*. Despite their rather dull coloration - predominately black, grey and mossy green - the male and female Guianan Toucanet are both extremely attractive birds, with their contrasting colours of yellow, red and chestnut. The light blue skin round the eyes is almost shining. The beak is black and dull red. They are the size of a jay and weigh 150g.

Members of the toucan family are intelligent birds, not unlike crows, and need some kind of environmental enrichment. Their temperament is very calm and they only show aggressive behaviour during the breeding season and even then never towards each other in my experience, though I have heard of other breeders who have experienced fighting between the sexes. My Green Aracaris *P. viridis* are much more nervous and need more space in order to feel comfortable. Members of the toucan family are best kept in pairs and not with other species. It is certainly not advisable to keep them with other breeding birds and never with birds smaller than themselves. In the wild, toucans often rob other birds' nests. They eat fruits and berries from a great variety of plants and, besides eggs and nestlings of other birds, the bigger species are capable of catching small birds on the wing. A friend of



© Bengt Larsson

Unusual coloured young male with female-like grey breast, with black feathers emerging. This was the breeding male.



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At 14 days old the chick's eyes have probably not yet opened.



The breeding female.

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Heel pads of 14 days old nestling.



© Bengt Larsson

At 23 days old the chicks' pin feathers are in uniform lines, like in an illustration taken from a school book on bird anatomy. Note the chicks have no down and the parents had removed all the peat from inside the box before laying the eggs.



© Bengt Larsson

Twenty-three days old.



© Bengt Larsson

At 30 days old the black feathers emerging on the breasts reveal that they are males.

mine had a pair of Swainson's Toucans *Ramphastos ambiguus swainsonii* that caught and ate a Bengalese that escaped and got into the toucans' aviary.

At the end of May 2003, I exchanged a female Keel-billed Toucan *R. sulfuratus* for an old pair of Guianan Toucanets. I put the pair in a covered outdoor aviary measuring 1m x 2m x 2m high (approx. 3ft 3in x 6ft 6in x 6ft 6in high). It was furnished with standing, small, full-branched trees and horizontal perches at different levels. The pair enjoyed using even the thinnest branches of the trees. After two weeks, high up in the aviary I put a nest box measuring 60cm x 20cm x 20cm (approx. 2ft x 8in x 8in). I filled the nest box with peat and it did not take more than 15 minutes before the male entered the nest box and started removing the peat. This method of triggering nesting works with many hole-nesting softbills (e.g. see D. Rinke's accounts of breeding trogons at Walsrode Birdpark, Germany). Within a few days the box was completely empty and a week later the female laid the first egg. Incubation commenced following the laying of the first egg, after which the female laid another egg each day until there was a clutch of four eggs. The male did 70% of the incubating during the day. The eggs did not hatch and I removed them five days after the expected hatching date.

Three weeks later the female started laying a fresh clutch of eggs. This time one of the eggs was punctured and the other three hatched after 16 days. When the chicks were just over 20 days old it suddenly turned very cold and one night the temperature dropped to below freezing point. In the morning the parents were in the nest box but when I came home from work and planned to take them inside, both parents were out of the nest box and the three chicks were dead. At the time the pair was upwards of 12 years old and last year produced a clutch of eggs when probably over 15 years old.

The following two years were spent building two new bird houses and aviaries. Although no breeding activity was expected, a few fertile clutches were laid, despite much disturbance and movement between aviaries. At the beginning of 2004 I had the opportunity to buy two more pairs from a dealer. All the pairs were given nest boxes measuring 60cm x 20cm x 20cm (approx. 2ft x 8in x 8in) hung at an angle of 45° and with a 10 cm (4in) entrance tube of natural cork. Often they could be heard inside working on the walls of the nest boxes, confirming their close relationship to the woodpeckers. They slept in the boxes every night.

One of the new birds had a female-like grey breast but a yellow band on the nape like a male and later proved to be a male. None of the breeders I have been in contact with in Denmark and the USA have ever seen such a bird, although Miguel Rochas in California bred a female with a yellow nape band that disappeared later.

Nothing much happened until the spring of 2006. By then I had lost

patience with the new pairs and was planning to change the males around. Used to the very obvious courtship behaviour of parrots, I found that of the toucanets much less obvious. They never sit close together, seldom preen each other and I have never observed them mating. The male does though frequently feed the female. What I have learned is that it is more important to listen to them than watch them. The male feeds the female while making a characteristic “chopping” sound, unlike any other, and often in the nest box, in which I believe that mating occurs.

One day the water bowl had been made messy with material from the nest box, behaviour I recognised from the older pair. Two weeks later there were two eggs. At least one more was laid but it was punctured. As scheduled they hatched with one day in between, following a 16 day incubation period. The chicks developed rapidly and their weight increased tenfold in four weeks. They were fed mostly *Zophobas* larvae and grasshoppers during the first two weeks. The parents kept the nest box perfectly clean. After 42 days one of the chicks was out in the aviary but returned to the nest box the same day. Two days later both of them were out in the aviary and after that only returned to the nest box at night. Once they were fully feathered it was obvious that they were two males. I let them remain with their parents for four months.

The parents never showed any aggression towards me but became more confident and took insects from my hand. The breeding male of the older pair hates me and attacks my hand when I am feeding it. He lost his tongue as the result of a fight through the wire with a male Green Aracari and I have to catch him a few times each year and clean his bill.

I feed my toucans and hill mynahs chopped fruits, berries and vegetables of at least five different kinds each day, using papaya, banana, apple, pear, grapes, elderberries, redcurrants, green peas, maize (sweet corn), peppers, squashes, eggplant (aubergine) and other low acid foods. Because of the serious danger of iron storage disease I use only universal food and pellets with a declared low iron content of less than 85ppm or mg/kg, such as Nutribird T16 pellets, TOVO and Orlux universal food. The ratio of fruit to universal food/pellets is about 58:38 with the remaining 4% consisting of livefood. They have never eaten slugs, earthworms, pinkie mice or crickets but enjoy grasshoppers, *Zophobas morio* larvae and some mealworms. They get 10-20 *Zophobas* worms per day, increased to 40 a day during the breeding season and occasionally get grasshoppers. The numbers are increased when they are raising young.

From the end of March to the end of May 2007, the young breeding pair produced five clutches, each of three or four eggs. All of them though were damaged and later disappeared. After the first clutch was damaged I



© Bengt Larsson

Pair with newly fledged young.



© Mogens Stig Andersen

Male at four months old.

started to give the pair more vitamin D<sub>3</sub> and water soluble calcium (Orlux CalciLux) unsuccessfully. It may be that the eggs have naturally thin shells. There is also the danger of them being damaged when the pair move about in the nest box and it is important that the birds are not disturbed at night. The nest box should be fixed at an angle, so that the birds do not jump down onto the eggs and there should preferably be some material in the bottom of the box to keep the eggs in place. This is difficult though, as the pair remove any loose material from the nest box.

This species is easy to keep and relatively undemanding and it should be possible to establish a self-sustaining population in captivity. I think it is high time we started a European group to cooperate over the breeding of members of the toucan family and I invite anyone interested to contact me: [bl@skanskbyggjtjanst.se](mailto:bl@skanskbyggjtjanst.se)

### Postscript

Since the above account was written, Bengt Larsson has travelled to the Czech Republic and exchanged one of his males bred last year for a female bred earlier this year at Olomouc Zoo. Olomouc Zoo now (October 2007) has 3.3, 1.3 bred there. Unfortunately, the zoo's breeding female died after the second clutch of young was reared. Bengt Larsson now has 4.4 unrelated birds and a friend of his in Sweden has 2.2, which includes a male from the author.

### Acknowledgements

My thanks to Leif Rasmussen and Aalborg Zoo in Denmark and Jerry Jennings, Amado Summers and Miguel Rochas in the USA.

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*The author is a biologist and a consultant to several Swedish zoos. For three decades he bred several species of lorries and lorikeets and in 1980 was among the first aviculturists to breed Duyvenbode's Lory. He later started to keep softbills. Bengt was recently appointed Editor of Fagelhobby, the Swedish national avicultural magazine.*

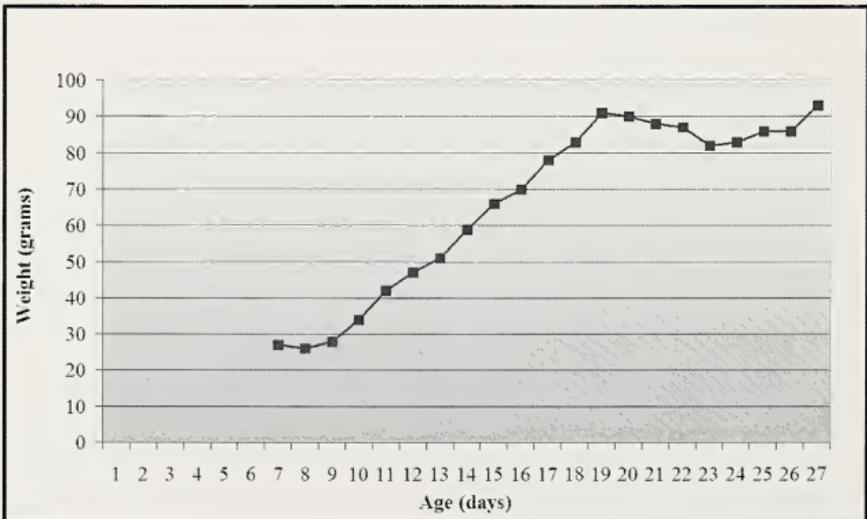
## HAND-REARING A WHITE-BROWED COUCAL *Centropus superciliosus* AT EXMOOR ZOO

by Derek Gibson

Our White-browed Coucals having successfully parent-reared their offspring over the past two years (see *Avicultural Magazine* Vol.112, No.2, pp.49-52 (2006)), it came as somewhat of a surprise when we found a three or four day old chick lying dead on the aviary floor. Up until then we had found the coucals most obliging parents that took great care of their young. When we inspected the nest, however, we found a further two chicks, very cold, but still alive, a clear egg and a second dead chick. The two surviving chicks were transferred to the zoo's Incubation and Rearing Station.

The first chick weighed 27g whereas the second chick weighed only 7g. Both were placed in a small pot lined with kitchen towel and small twigs to prevent any problems with splayed legs, and then placed in a brooder set at 33°C (91.4°F). The larger chick's eyes had started to open. We quickly pooled ideas with staff at the Cotswold Wildlife Park, where the White-browed Coucal had previously been successfully hand-reared. The chicks were offered pinkie mice, rat pups, waxmoth larvae, mealworms and papaya, plus a vitamin supplement, Ace-High, a Vetarc product that has been used at the zoo over the past three years.

Fig. 1. Growth rate of hand-reared coucal.



Unfortunately, the second chick died almost immediately, but the first chick went from strength to strength (as can be seen from the accompanying growth rate graph and hand-rearing record) and by day 21 was observed feeding itself and by day 27 was weaned

Table 1. Hand-rearing record days seven to 27.

Age (days)	Date	Weight	Observations
7	04.05.07	27g	Placed in brooder set at 33°C (91.4°F), along with a bowl of water to increase the humidity.
8	05.05.07	26g	From 7.30am – 5.30pm fed on pinkie mice soaked and cut into quarters and waxworm larvae (killed).
9	06.05.07	29g	Eyes three-quarters open.
10	07.05.07	34g	Fed crickets and mealworms.
11	08.05.07	42g	"
12	09.05.07	46g	"
13	10.05.07	51g	"
14	11.05.07	59g	"
15	12.05.07	65g	"
16	13.05.07	70g	Rat pups and minced (ground) meat added to diet. Feathers developing on the breast.
17	14.05.07	77g	Stopped continual begging and started to make more characteristic coucal sound.
18	15.5.07	83g	Transferred to exercise cage and given fruit, insectivorous food and minced (ground) meat.

*Derek Gibson*

Eleven days old.

Age (days)	Date	Weight	Observations
19	16.05.07	91g	Food no longer placed in chick's mouth, instead we wait for the chick to make the first move.
20	17.05.07	90g	Soaked Zoo A given at feed.
21	18.05.07	88g	Started to feed itself, taking mealworms and locusts.
22	19.05.07	87g	"
23	20.05.07	82g	"
24	21.05.07	83g	"
25	22.05.07	85g	"
26	23.05.07	85g	"
27	24.05.07	93g	Weaned.

*Derek Gibson*

**Fifty days old.**

Upon being weaned it was housed in a large flight cage and upon determination of its sex will, it is hoped, go to make up a second pair here at Exmoor. At the time of writing (summer 2007), the breeding pair is incubating a further three eggs and, hopefully, this time will successfully rear the young and take us a few steps further forward in establishing a self-sustaining captive-breeding population of White-browed Coucals.

*Derek Gibson is Head Keeper at Exmoor Zoological Park, South Stowford, Bratton Fleming, Barnstaple, Devon EX31 4SG, UK. Tel: 01598 76335/E-mail: Derek.r.gibson@btinternet.com. It was the first collection in the UK to breed the White-browed Coucal.*

## THE ORIOLE FINCH IS A STRANGE FINCH

by Simon Espley

The Oriole Finch *Limurgus olivaceus* is a secretive and seldom seen species from the forests of west, central and east Africa. I have spent days craning my neck staring up into the gloom of central African equatorial forest canopies, during my many birdwatching trips to that part of the world, hoping in vain to catch a glimpse of this elusive species. Although so far I have had no luck, I intend to keep trying.

Imagine my interest therefore when during 2006 I heard that a few pairs were to be imported into South Africa, and that I had secured one of these pairs. I could barely conceal my excitement as I made my way to the airport to pick up my prized pair.

The male Oriole Finch is a really stunning looking bird that does indeed resemble a miniature black-headed oriole *Oriolus* spp. The female Oriole Finch is a more sober coloured bird. The large head and sturdy looking beak of the Oriole Finch appear to be an adaptation for a specific diet, but reference books do not shed much light on this subject. As a matter of fact, reference books do not have much to say about this species. Its body is marginally smaller than that of our Bully or Brimstone Canary *Serinus sulphuratus* but, unlike most Fringillidae, the Oriole Finch is mostly silent.

It has a large range, estimated at 180,000sq km (approx. 70,000sq miles), covering a large area of west, central and east Africa. The size of the global population has not been quantified, but it is believed to be substantial, as the species is described as locally common in at least parts of its range. Its preference is for tropical, subtropical and moist montane forests.

I set off for home with my two birds, which sadly were the only two to survive the importation. There I set about settling them down in my Cape Town aviaries in the hope that the pair would breed. I housed them on their own and left them pretty much to their own devices in a thickly planted aviary measuring 2m x 5m x 2.5m high (approx. 6ft 6in x 16ft x 8ft high). Clear fibreglass sheeting covers 80% of the aviary roof. The sides consist of 80% shade cloth to prevent visual contact with birds in neighbouring aviaries. All my aviaries are covered externally with 6mm x 6mm (approx. ¼in x ¼in) welded mesh and are therefore mouse-proof. Food is provided through a door, without the need to enter the aviary. Fresh drinking water is dispensed into a shallow baking tray four times a day via a timer. A twice daily fine mist spray that keeps the plants happy in summer is also on a timer. The plants include tall reeds, wild grasses, herbs and various weeds. The Oriole Finches remain very secretive and spend much of their time in the



© Simon Espley

#### Chicks at 10 days old.

depths of the reeds or hiding in the slangbos.

They have interesting dietary requirements and have settled on the following: a seed mix including oily seeds (niger, linseed, canary and rape), shelled sunflower seeds, papaya, cucumber, fresh and soaked dried figs, grated broccoli and corn, fresh seeding grasses, sprouting seeds, wild flowers such as dandelions, thistles and daisies, mealworms, termites, soaked softbill pellets with Pro Nutra added. The seed gets a weekly dose of cod liver oil and wheatgerm oil and powdered calcium, before being discarded the next day. My birds ignore all the usual finch seeds such as millet and manna.

Much to my delight, within three months, the pair produced three chicks. As far as I am aware, this is the first recorded captive breeding in South Africa and possibly anywhere in the world. (In his *First Breeding Records for Birds Reared to Independence under Controlled Conditions in the United Kingdom*, Dave Coles lists it as having been bred by Peter Paris in 1974. To the best of my knowledge though Simon Espley's is the first published account of breeding the Oriole Finch. - Ed.) Neville Brickell of the Indigenous Bird Breeders' Group (Southern African Region) recalls Oriole Finches being brought into South Africa in the mid-1900s on boats that came down the east African coast, but cannot recall any breeding claims. I know of no data on captive breeding and very little is available on



Juvenile at 24 days.

© Simon Espley



Juvenile Oriole Finch aged 47 days old. This is the bird hatched in November 2007.  
Note that it still has a black bill.

© Simon Espley



© Simon Espley

**Male Oriole Finch.** The coloration of the male varies slightly from subspecies to subspecies.



© Simon Espley

**Male Oriole Finch (right) and female (left).**

its breeding habits in the wild. My birds' cup-shaped nest was made from coconut fibres, hessian and various plant fibres gleaned from plants in the aviary. The nest was placed in hanging slangbos. Three eggs were laid on consecutive days. They were white, shaded with light blue/green, and had reddish brown pinprick sized speckles to blotches 2mm in diameter. The young left the nest 21 days after hatching.

A further pair of Oriole Finches found its way into South Africa earlier this year and I was lucky enough to secure this pair. I have paired the two with my youngsters and now have three unrelated pairs and a spare bird. At the time of writing (June 2007) these are the only Oriole Finches in South Africa, but I hear some more may arrive later this year.

### Postscript

The same pair subsequently produced a further chick in November 2007, that at the time of Simon's recent e-mail (December 18th 2007) was independent and "learning about life" in a nursery aviary along with recently-bred Red-faced Crimsonwings *Cryptospiza reichenovii*, Lavender Waxbills *Estrilda caerulescens* and Red Siskins *Carduelis cucullata*. Simon confirmed that a number of wild-caught Oriole Finches found their way from Tanzania to South Africa in early 2007, but so far as he is aware, no successful breedings have resulted from the importation of that batch of birds.

*Simon Espley, the author of the above article, which was published first in the South African magazine Avizandum (June 2007), is a founder-member of the Rare Finch Conservation Group (website: [www.rarefinch.co.za](http://www.rarefinch.co.za)). The postscript was sent just after Simon had returned from a trip to south-west Uganda to search for Shelley's Crimsonwing *C. shelleyi* and visit the Rare Finch Conservation Groups's Crimsonwing Project in Uganda. He can be contacted by e-mail at: [simon@africageographic.com](mailto:simon@africageographic.com)*

## AVICULTURAL MAGAZINE BACK ISSUES

The society has a large stock of back issues mostly from 1935 onwards but there are also some earlier issues still available. They are priced £3.00 each (including p&p). Please check availability before placing an order. Overseas members may be able to pay by credit card through a PayPal invoice, but this service is not available in all countries. All enquiries should be addressed to: Paul Boulden, Hon. Secretary/Treasurer, Avicultural Society, Arcadia, The Mounts, East Allington, Totnes, Devon TQ9 7JQ, UK or E-mail: [admin@avisoc.co.uk](mailto:admin@avisoc.co.uk)

## ORNITHEA 2007 - A SHOW OF SUPERLATIVES

by Tony Pittman

The beginning of November each year is for me Ornitheia time. This unique show organised by the aviculturists' club in Cologne, Germany, never ceases to amaze me and this year's show - open to the public from Thursday, November 1st-Sunday, November 4th - was no exception; in fact the club members surpassed themselves.

The club was formed in 1961 and has some 50 members. It has a clubhouse in a suburb of Cologne and the members meet there regularly to exchange information on keeping and breeding all types of birds, have a communal meal and drink the popular local beer. Sometimes they invite a speaker, which is how I got to know about the club and later became a member.

The show is held in the hall of a local secondary school, which the club takes over for two weeks for a peppercorn rent. The lay-out is carefully planned and all the members are involved in the build-up to the show and help clear everything away at the end.

This year, some 500 birds of 182 species and subspecies, bred locally and in perfect condition, were displayed in 123 decorated aviaries for larger birds and large exhibition cages for smaller birds. All the cages and aviaries were planted and some had water features and rock formations. Also, every cage and aviary had detailed information about the occupants.

The centrepiece of this year's show was an astonishing swamp landscape with a painted background, rock face, waterfall, pool, shrubs, grasses, boulders and a large tree. Housed in it were seven species of birds, including egrets, avocets, plovers, gulls and two species of ibis, with no wire netting or any other form of barrier between the birds and the public.

Ornithea 2007 attracted some 6,000 visitors, including many from neighbouring countries such as the Netherlands, Belgium and Switzerland. Among them were many children, who were thrilled to have such a great opportunity to see close-up in naturalistic settings, native birds such as the Wren *Troglodytes troglodytes*, Robin *Erithacus rubecula*, Pied Wagtail *Motacilla alba yarrelli*, Grey Wagtail *M. cinerea*, Hoopoe *Upupa epops*, Kingfisher *Alcedo atthis* and Lesser Spotted Woodpecker *Dendrocopos minor*.

There were 57 species of parrots, ranging from hanging parrots through to conures and lorries, Amazons, cockatoos, macaws and the Kea *Nestor notabilis*. There were 10 species of owls, as well as a wide range of finches and softbills. Bali Starlings *Leucopsar rothschildi* were on show again this

year in a large, beautifully planted aviary with lush vegetation and tropical flowers.

On the Saturday there was a well attended all-day symposium. Bernd Marcordes, formerly of Walsrode Birdpark and now Curator of Birds at Cologne Zoo, spoke on cockatoos, Lars Lepperhoff from Switzerland described his recent expedition to the Congo to see Grey Parrots *Psittacus erithacus* and Norbert Hebel spoke about keeping and breeding Amazon parrots. Other speakers included Jos Hubers, who gave a presentation on lories and Simon Bruslund Jensen, formerly of Al Wabra Wildlife Preservation and now at Walsrode, who spoke about his experiences at Al Wabra and Walsrode Birdpark. I gave a presentation on the Slender-billed Conure *Enicognathus leptorhynchus* in the wild and in aviaries. At the end of the symposium I was very pleased to be invited to accept from Norbert Hebel organiser of the symposium and Walter Grau, chairman of the club, a donation of 1,000 Euros (approx. £750 or US\$1,500) for the Hyacinth Macaw *Anodorhynchus hyacinthinus* project in Brazil.

On the Sunday morning the local special interest group held a meeting on breeding conures, at which Thomas Arndt gave an illustrated presentation on the many recent changes to the taxonomy of the conures.

In addition to the show, there was an area where the work of bird artists was displayed and there was an informative display by the customs authorities. There was a bookshop in the hall and a tombola. Food and drink, organised by the club members, was available throughout the day in a side-room and there was a barbecue just outside.

The airport at Cologne is very close to the suburb where the show takes place and several low-cost carriers fly to it.

*Tony has the website: [www.bluemacaws.org](http://www.bluemacaws.org)*

\* \* \*

## LONG-LIVED GLOSSY STARLING

Chris Brack has sent news from Germany of a long-lived Greater Blue-eared Glossy Starling *Lamprotornis chalybaeus* (Hohes Alter eines Grünschwanz-Glanzstares, *Gefiederte Welt* August 8/2007, p.226). The bird lived in a private aviary for 24 years and eight months. As it was an adult when purchased, they estimate it may have been 27 or 28 years old.

## THE SOCIETY'S VISIT TO WALSRODE BIRDPARK, GERMANY

by Andrew Owen

Early in October, 44 members and guests spent three highly enjoyable days at the world-famous Walsrode Birdpark in northern Germany. The visit was made an even more memorable experience, thanks to the wonderful hospitality of the park's Curator Simon Bruslund Jensen. Simon took us on an extremely thorough tour of the park, which included a look behind the scenes at all the off-show facilities. Walsrode has one of the finest bird collections in the world, and the skill and dedication of Simon and his staff were clear for all to see.

The park covers approximately 30 hectares (74 acres) and is beautifully landscaped with mature trees, shrubs and manicured lawns. There are some 5,000 birds of approximately 600 species, so the full three days of our visit were needed to try to see everything. All the aviaries and enclosures were immaculately maintained and spotlessly clean, something for which the park has become well-known.

It is difficult to pick out favourite birds and areas of the park, but one of the highlights for me was the collection of Madagascan birds, many of which must be unique in aviculture. The Blue Couas *Coua caerulea*, Crested Couas *C. cristata* and Giant Couas *C. gigas* (non-parasitic members of the cuckoo family) were a wonderful sight, with the first two species breeding well. The Madagascar Blue Pigeon *Alectroenas madagascariensis*, Madagascar Crested Ibis *Lophotibis cristata*, Long-tailed Ground-Roller *Uratelornis chimaera*, Cuckoo-Roller *Leptosomus discolor* and the lovely Pitta-like Ground-Roller *Atelornis pittoides* are all spectacular birds. We visited the hand-rearing room and were privileged to see the first Blue-eyed Ibis *Threskiornis bernieri* ever hatched in captivity. This is a Critically Endangered species, yet Simon told us that the original birds were found on sale in a meat market in Madagascar and were bought by the kilo - and saved from the cooking pot! Conservation clearly plays an important role in the work being done at Walsrode with species from Madagascar being the focal point of this, although Walsrode also works with numerous other threatened species from around the world.

There are two most impressive tropical facilities, the first of which has a range of indoor aviaries housing a multitude of wonderful avian gems including Andean Cock-of-the-Rock *Rupicola peruvianus*, Golden-headed Quetzal *Pharomachrus auriceps*, Hooded Pitta *Pitta sordida*, Banded Pitta *P. guajana*, Spangled Cotinga *Cotinga cayana*, Carmine Bee-eater *Merops*



*Walsrode Birdpark Archive*

**Horned Guan.**



*Karen Heath*

**Christopher Marler, Andrew Owen, Simon Brusland Jensen and Raymond Sawyer.**



*Walsrode Birdpark Archive*

**Blue Coua.**



*Andrew Owen*

**Shoebill.**

*nubicus* and a number of fruit doves, such as the Beautiful *Ptilinopus pulchellus* and Pink-headed *P. porphyreus*, to name but a few.

Pigeons and doves are something of a speciality at Walsrode, which must have one of the most impressive collections of these birds. They are one of the main groups housed in the other tropical house - the Indonesian exhibit. Victoria *Goura victoria* and Southern Crowned Pigeons *G. scheepmakeri* were an impressive sight strolling along the paths amongst the visitors in the company of Pheasant Pigeons *Otidiphaps noblis*, Sulawesi Ground-Doves *Gallicolumba tristigmata*, Emerald Doves *Chalcophaps indica* and Thick-billed Ground-Pigeons *Trugon terrestris*. This tropical house is huge and we saw different species each time we visited it during the three days. A female Giant Pitta *P. caerulea* sitting quietly in the undergrowth, a Black-capped Babbler *Pellorneum capistratum* with its unusual walking gait, a noisy flock of Chestnut-backed Scimitar Babblers *Pomatorhinus montanus* and a Banded Pitta digging in the soil by my feet were among the highlights for me.

Cranes, pelicans, ibises and storks are among other groups well represented in the collection, with the amazing Shoebill *Balaeniceps rex* vying for the title of strangest looking bird on the planet! Impressive birds of prey included Harpy Eagle *Harpia harpya*, Lammergeier *Gypaetus barbatus*, Steller's Sea-Eagle *Haliaeetus pelagicus*, Great Grey Owl *Strix nebulosa* and Hawk Owl *Surnia ulula* and, in their off-show aviary, Secretary Birds *Sagittarius serpentarius* with a well-grown youngster.

It was nice to see European birds displayed in really well thought-out aviaries, one of which has Red-backed Shrike *Lanius collurio*, Hawfinch *Coccothraustes coccothraustes* and Corncrake *Crex crex*. There is a comprehensive display of parrots, of which the highlights for me were the Horned Parakeet *Eunymphicus cornutus*, (Tahiti) Blue Lorikeet *Vini peruviana* and Desmarest's Fig Parrot *Psittaculirostris desmarestii*.

I would recommend a visit to Walsrode to everyone with an interest in keeping birds. There is so much to see and learn and, where else can you see Kagu *Rhynochetos jubatus*, Horned Guan *Oreophaps derbianus*, Greater Bird of Paradise *Paradisaea apoda*, Harlequin Duck *Histrionicus histrionicus*, Siberian Crane *Grus leucogeranus* and Roadrunner *Geococcyx californianus*, together with some 594 other species, all in the same place?

Meeting new friends and catching up with old ones (some of them very old!), sharing thoughts and ideas with like-minded bird keepers and seeing one of the best collections of birds anywhere in the world, was a great experience. A big thank you must go to Mike Curzon for organising everything and helping to make this Avicultural Society visit such an enjoyable one.

## LETTER TO EDITOR

Prof. J. R. (Bob) Hodges has long had a special interest in the Orange-bellied Parrot or Parakeet *Neophema pulchella* and recent developments have prompted the following letter from him:

I had almost forgotten the exciting day on which I flew from Hobart to their breeding area in virtually unexplored south-west Tasmania where I was able to see and photograph several specimens and their nests. They were extraordinarily beautiful with grass-green plumage and a large bright orange patch on the abdomen, contrasting with a few I had seen some years previously when Australian parrots were being smuggled into the UK. These were pale and unattractive looking like faded Elegant Parrots or Parakeets *N. elegans*.

Apparently several attempts have been made to reintroduce and re-establish the species in its normal habitat by liberating small numbers of aviary-bred birds that have not been successful and the species is still listed as Critically Endangered with fewer than 150 birds in the wild. Biologists in the Environment Departments of Tasmania and Victoria blame the situation on the loss of habitat in Victoria where they spend their non-breeding season. Anyone who has visited at intervals, as I have, this particular area of 'countryside' around Melbourne will have noticed that during the last 40 years much of the 'pastoral area' has changed to large industrial estates and their supporting towns. I cannot imagine that the parrots will adapt their behaviour and adopt this new habitat.

In October this year (2007) about 80 birds, reared in Hobart, Adelaide Zoo and at Healesville, were released in their Tasmanian breeding area. I hope that this major effort to re-establish the species in the wild will be successful but I am not optimistic. I consider that an enormous amount of money and effort has been wasted. I think that the organisers of this effort will be very disappointed, and should have involved the cooperation of well-known aviculturists who would almost undoubtedly have established them in their aviaries. Healthy specimens in appropriate aviaries are far more attractive than lifeless, stuffed and withering creatures in museums.

## BOOK REVIEWS

### PEKIN ROBINS AND SMALL SOFTBILLS

Peter Karsten was born in Germany and, following the completion of his formal education in Germany and Sweden, emigrated to Canada in 1962. After a 30-year career with Calgary Zoo, for 20 years of which he held the positions of Zoo Director and Executive Director, he retired in 1994 and turned his attention to small softbills, keeping and breeding Pekin Robins *Leiothrix lutea* for the past 10 years. (An article by Peter Karsten on keeping and breeding the European Robin *Erithacus rubecula* will appear in a future issue of the *Avicultural Magazine*. - Ed.) His professionalism and hands-on avicultural skills shine through in his delightful book, *Pekin Robins and Small Softbills - Management and Breeding*.

There is a dearth of good quality, up-to-date books on bird husbandry, particularly relating to softbills, so this well thought-out personal account of managing these charming birds will be welcomed by bird keepers. The 17 colour plates, 60 high quality photographs and numerous line drawings by the author help make this book even more endearing.

It is clear that Peter Karsten has a real passion for these birds and he covers in fine detail every aspect of their husbandry. A really practical and useful book, it has chapters covering biology, housing, general care, acquisition, breeding, hand-rearing, feeding and health care, as well as cultivating livefood.

Packed with information gathered through personal experience, Peter Karsten's book is a mine of information for beginners and experienced aviculturists alike. The section on the determination of sex is of particular interest. Although the Pekin Robin (or Red-billed Leiothrix) is frequently kept, it continues to surprise me how many aviculturists are unable to sex their birds accurately. This no longer needs to be the case, as the author resolves this tricky problem.

I am very impressed by his coverage of subjects such as aviary design, predator prevention, health care and cultivating livefood, with his line drawings, used throughout the book, enhancing his coverage of each subject. Although the author lives in Canada, all of the techniques described are applicable here in the UK and probably elsewhere as well. The climate is similar to that of the UK and northern Europe and, although the predators may be different, the methods of keeping them out of our aviaries are much the same wherever we live.

There is a chapter on other softbill species, which gives brief descriptions and useful management tips. The Pekin Robin is the main focus of the

book, but the author's practical ideas and common sense approach highly recommend Peter Karsten's book to serious aviculturists caring for just about any other species of aviary birds.

*Pekin Robins and Small Softbills - Management and Breeding* (ISBN 978-0-88839-606-8) by Peter Karsten, hard cover, 252 pages, 17 colour plates, 60 colour photographs and 240 line drawings, is published by Hancock House Publishers, 1431 Harrison Ave., Blaine, WA 98230-5005, USA. Price US\$49.95 plus s/h. It can be ordered by Tel:(604) 538-1114/Fax:(604) 538-2262/Toll Free Tel:800-938-1114/Fax:800-983-2262/E-mail: sales@hancockhouse.com/Website:www.hancockhouse.com

**Andrew Owen**

## THE LAPWING

*The Lapwing* by Michael Shrubbs is the latest addition to the well established series of Poyser monographs. It is about the ecology, behaviour, breeding biology and conservation of the Northern Lapwing *Vanellus vanellus*. A retired farmer who has studied the Lapwing on his farm and elsewhere for over 40 years, the author is well placed to have written this monograph, which is both very readable and well researched.

A brief introductory chapter sets the Northern Lapwing in context as one of 24 species of the genus *Vanellus* - one of which the Javanese (or Sunda) Lapwing *V. macropterus* has not been recorded for over 60 years and may be extinct. The following five chapters focus on information and analysis of the breeding and winter distribution, habitats, habitat use and population changes of the Northern Lapwing in the UK and Europe. Over 90% of the Lapwings in the UK now breed on agricultural land, which is also their main winter habitat.

A chapter is devoted to the Lapwing's food and feeding behaviour and, a further five chapters, cover all aspects of its breeding behaviour and biology, followed by a chapter on chick rearing and fledging success. The section on the chick's diet - invertebrates mainly, with earthworms and beetles, being amongst the more important food items - should be of interest to aviculturists. The chapter on movements and mortality describes the spectacular movements of large flocks of Lapwings in response to cold weather. In really severe winters all of the Lapwings may leave the UK.

The final chapter is entitled - Conservation and the future - and looks at the problems facing the Lapwing related to habitat loss, with reductions of wet grassland, increasing agricultural intensification and changes in farming practises. Recovery will require habitat restoration and the promotion of less intensive agriculture.

Appendices document changes in the breeding population and range of the Lapwing in Europe and list breeding habitats, diets and the scientific names of species referred to in the main text. As befits such a well researched book, the bibliography has 18 pages of references.

Each of the 14 chapters is graced by monochrome illustrations by Robert Gillmor which really capture the spirit of the Lapwing in a way that only he can. These for me are the “icing on the cake” of this well written and carefully produced book that is readable yet includes good science.

*The Lapwing* (ISBN 978-0-7136-6854-4) by Michael Shrubbs, 232 pages, eight colour plates which include 29 photographs of Lapwings and their habitat, monochrome illustrations by Robert Gillmor, plus tables, etc., is published by T & A D Poyser, an imprint of A & C Black Publishers Ltd (website:www.acblack.com). It is a hardback price £40.00 in the UK.

**Roger Wilkinson**

## WATERBIRDS AROUND THE WORLD

Albatrosses, flamingos, swans, geese, ducks, cranes, waders, gulls, terns, auks and, other waterbirds, are among the world’s most threatened birds. They share a dependency on the world’s wetlands, seas, coasts, estuaries, lagoons, lochs, rivers, marshlands, swamps, tundra and other peatlands, and have come to symbolize the changing, fragile nature of our planet.

With this in mind, more than 450 conservation scientists from 90 countries attended a conference entitled - Waterbirds around the world - held in Edinburgh, Scotland, in 2004. The papers, more than 240 of them, preceded by The Edinburgh Declaration, the address by HRH The Prince of Wales and those by government ministers and other officials, etc., have now been published in *Waterbirds around the world - a global overview of the conservation, management and research of the world’s waterbird flyways*, which describes the global efforts being made to halt the decline in waterbird populations.

Edited by Gerard Boere, Colin Galbraith and David Stroud, *Waterbirds around the world* (ISBN 0 11 497333 4), hardback, 940 pages, over 250 colour photos and more than 500 graphs, tables and maps, is published by The Stationary Office, 71 Lothian Road, Edinburgh EH3 9AZ, UK. It can be ordered from there by Tel:+44 (0)870 606 5566/Fax:+44 (0)870 606 5588/E-mail:enquiries@tsoscotland.com/Website:www.tsoshop.co.uk

**Malcolm Ellis**

## NEWS & VIEWS

### SUCCESSFULLY REARED

Loro Parque Fundación's Lear's Macaw *Anodorhynchus leari* hatched earlier this year (see News & Views Vol.113, No.2, p.93 (2007)), was reared successfully by its foster parents, a pair of Green-winged Macaws *Ara chloropterus*. A second chick was reared by a second pair of Green-winged Macaws and fledged in October. A third chick being reared by its parents was about to fledge.

\* \* \*

### IMPORTANT NEW ARRIVALS AT CHESTER ZOO

After a long wait Chester Zoo is delighted to have finally got a new female Red Bird of Paradise *Paradisaea rubra*. She is said to be the only female Red Bird of Paradise in Europe and has joined the three males in the zoo's Islands in Danger exhibit. After almost two years of hard work and negotiations the zoo has also finally imported four pairs of Endangered Visayan Tarictic Hornbills *Penelopides panini panini* from Panay Island in the Philippines. It is hoped they will form the nucleus of a European breeding population. Chester Zoo has long supported field conservation in the Philippines and the breeding centre there where the birds were bred. It is assisting with plans for trial reintroductions of this species and several others endemic to the Philippines.

\* \* \*

### CONTINUING TO BREED

Bernard Sayers whose autobiographical profile was published in the *Avicultural Magazine* Vol.111, No. 4, pp.147-160 (2005), has written to say that although his collection is now full of geriatrics, with many of his birds having been in his collection for over 20 years, a few for over 30 years and one for over 40 years, nevertheless, a few still bred successfully during 2007. Seven Indian Scops-Owls *Otus bakkamoena* were raised, five Burrowing Owls *Athene cunicularia*, six Boobook Owls *Ninox boobook*, three Chaco Owls *Strix chacoensis*, one Northern White-faced Scops-Owl *Ptilopsis* (formerly *Otus*) *leucotis*, one Tropical Screech-Owl *Megascops choliba*, three Crested Bronzewing Pigeons *Geophaps lophotes* and one Princess of Wales' Parakeet *Polytelis alexandrae*.

## GROWING CONCERN IN AUSTRALIA

There is growing concern among Australian aviculturists over the fact that dealers have been visiting bird sales around the country and buying up all the Australian-bred Cuban Finches (Grassquits) *Tiaris canorus* they can get their hands on. The birds are exported to the USA and, according to one report, onto Canada, leaving Australian aviculturists fearful that their established stocks of these sought-after birds will be left severely depleted and could even lead to their disappearance from Australian aviaries.

\* \* \*

## EXCITING DISCOVERY

Since 1995 the Bolivian organisation Armonía (BirdLife International's partner in Bolivia) and Loro Parque Fundación of Spain have been working together on a conservation programme for the Critically Endangered Blue-throated Macaw *Ara glaucogularis*. Loro Parque Fundación recently donated a new vehicle to the programme and almost immediately this led to the exciting discovery of a further 70 Blue-throated Macaws at a single roost on a ranch to the west of the main river, the Río Marmoré. Other new sites each with a few macaws were discovered in the same region. As a result of these discoveries the estimated size of the overall population of the Blue-throated Macaw has been revised upwards from 150-250 birds to 250-350 birds. The programme team works with local cattle ranchers and law enforcement agencies developing and implementing protection measures, as no officially protected area yet exists for this species.

\* \* \*

## PROBABLY ANOTHER FIRST

Raymond Sawyer has succeeded in breeding the Long-toed Lapwing *Vanellus crassirostris*. Three eggs were laid of which two hatched and both chicks were reared. It is believed to be the first time that this African lapwing has been bred in the UK.

Raymond has added a number of birds to his collection, including some more Harlequin Ducks *Histrionicus histrionicus* and has obtained a Victoria Crowned Pigeon *Goura victoria* as a mate for his unpaired bird that was sharing an aviary with the Southern or Scheepmaker's Crowned Pigeon *G. scheepmakeri*.

## TRACKING THE NORTHERN BALD IBIS

Eight Critically Endangered Northern Bald Ibis or Waldrapp *Geronticus eremita* were hand-reared earlier this year at Chester Zoo. Later they were transferred to Jerez Zoo in Spain (where this species is also being hand-reared), prior to being released into the wild in southern Spain. Chester Zoo's Curator of Birds and Mammals, Mike Jordan, said: "Hand-rearing the birds is the only way to ensure their successful release into the wild. By doing it this way, we can show the birds the safest places to live and the best feeding sites and food once we release them. Every bird released will be fitted with a radio transmitter so their movements can be tracked."

In 2002, a previously unknown small breeding colony of Northern Bald Ibis or Waldrapp was discovered in the desert in Syria. Two males and a female were trapped, ringed (banded) and fitted with satellite transmitters. These birds later flew south to Yemen, then across the Red Sea to the highlands of Ethiopia, where they were found along with an unmarked fourth bird wintering on the shore of a small, remote pond. It was hoped that others might be found wintering nearby. Mystery still surrounds where the young birds go between fledging and returning to the colony to breed, about two years later.

\* \* \*

## UNUSUAL BREEDINGS

It was reported in *Cage & Aviary Birds* November 1st 2007, p.5, that three female Southern Ground Hornbills *Bucorvus leadbeateri* had been hand-reared and a male chick had been parent-reared at The Wildlife Park at Cricket St Thomas, Chard, Somerset. The latter is said to be the first Southern Ground Hornbill chick to be parent-reared in the UK. It will remain at Cricket St Thomas and the three females will be used to establish new breeding pairs in other collections.

In the issue for December 27th 2007, pp.14-15, Stephen Dew described how earlier in the year he had succeeded in breeding the Grey-sided Laughingthrush *Garrulax caerulatus*. The pair had lived in his old aviary for six or seven years, but it was not until he had a new aviary built and the Grey-sided Laughingthrushes were transferred to it, that the pair started to build a nest the very next day! The first breeding attempt failed, but after adding some more dry leaves and making other adjustments to the deep, cup-shaped nest, the pair made a second attempt. This time the female laid a clutch of three eggs, which hatched on May 1st. The first chick fledged on May 18th, followed later by the other two. They were reared on "pinkie maggots" (greenbottle larvae *Lucilia* sp.) and mealworms.

## OBITUARIES

### PETER LOWE

We have belatedly learned of the death of Peter Lowe, who died on June 6th 2007, aged 71. Peter's father was the Rev. Canon J. R. Lowe, who joined the Avicultural Society in 1927.

Peter appears to have joined the society in 1969, in which year it was reported that he had been appointed Curator of Newquay Zoo, here in Cornwall, which hoped to open in June of that year. Richard Meyer recalls visiting him there and finding him "very charming" and "of the 'old school' - polite, courteous, welcoming and humourous." Peter had previously worked at Chester Zoo and later worked at Cricket St Thomas and in a number of other collections in the UK and abroad.

### LAWRENCE (LEN) CAHILL

Another former member who died earlier in the year was Lawrence (Len) Cahill. Len joined the society in 1960, a few years after being appointed Superintendent of Paignton Zoo, having previously worked at London Zoo. He later worked at Dudley Zoo, the Department of Zoology, University of Ife, Ibandan, Nigeria and held a senior post at Toronto Zoo in Canada, before retiring and moving with his wife to Spain. Avicultural Society Council Member Jeff Trollope started working at London Zoo in 1949, which is where he first met Len. He got to know him when they worked together on the animal rides, when on summer afternoons, after having finished work on their sections, younger keepers were expected to 'volunteer' for riding duties - there were not just donkey and pony rides, but a pony carriage, Llama carts, camel and elephant rides. Len was, Jeff recalls, "that rarity, a good practical zoologist, with a wide academic knowledge." He left the zoo in 1958 to further his career. Jeff and his wife Pat, saw Len on several occasions during visits to Toronto Zoo and Len and his wife Mathilde, visited them when they returned to the UK to see relatives. They last saw Len and his wife in the UK on the week-end of the society's visit to Paignton Zoo in September 2005. It was a final nostalgic visit for Len, recalling the time when he was Superintendent of Paignton Zoo.

### DR KENNETH C. PARKES

Dr Kenneth C. Parkes, who joined the society in 1956, has died. He joined the Carnegie Museum of Natural History in Pittsburgh in 1953 and was Curator of Birds from 1965 until 1996, when he retired.

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## LATE HATCHED CHICKS

After a pause of several years, Loro Parque has again succeeded in breeding the Lesser Vasa Parrot *Coracopsis nigra*, a species which is rarely bred in captivity. The pair raised a single youngster, which by October had fledged and was difficult to distinguish from its parents. Other late hatched chicks included three Chestnut-fronted Macaws *Ara severa*, some Scarlet Macaws *A. macao* and Blue-and-Yellow Macaws *A. ararauna*, along with several Blue-throated Macaws *A. glaucogularis*. A new male Golden-fronted Parakeet *Bolborhynchus aurifrons* had been transferred from quarantine to the breeding station and paired with a female that had been hatched there and, late in the year, the pair had produced eggs and hatched and reared two chicks.

\* \* \*

## DISAPPOINTING RESPONSE

Andrew Owen was rather disappointed by the initial response to the Special Interest Groups (see *Avicultural Magazine* Vol.113, No.1, inside back cover & Vol.113, No.2, p.56 (2007)). In the case of the Special Interest Groups he is involved with - laughingthrushes *Garrulax* spp., Chestnut-backed Thrush *Zoothera dohertyi*, Fairy Bluebird *Irena puella* and Rufous-bellied Niltava *Niltava sundara* - Andrew only heard from one person regarding the Fairy Bluebird and did not hear from any other keepers of the Chestnut-backed Thrush. He was contacted by a few laughingthrush keepers and through his own enquiries and word of mouth, succeeded in locating about 250 laughingthrushes of some 23 species. Quite a lot of these are kept in large enough numbers, that with good management and cooperation between keepers, they could be established in captivity. Andrew is also concerned that a lot of these birds have not been DNA-sexed and urges everyone with species that are not sexually dimorphic, to get their birds sexed, as it can save years of frustration and disappointment wondering why your birds are not breeding.

\* \* \*

## THREAT TO AFRICAN VULTURES

The veterinary drug diclofenac, whose widespread use led to the deaths of millions of vultures in India, Pakistan, Nepal and other south Asian countries, has been licensed for use in Tanzania. Since the patent for the drug expired it has been produced in generic form by hundreds of manufacturers worldwide and is sold under dozens of different names. The manufacturer of the brand found in Tanzania exports the drug to 15 African countries. It is a development that could prove disastrous for African vultures.



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