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RECORDS OF THE BREEDING OF THE GUIRA CUCKOO *Guira guira* BETWEEN 1987-2004 IN FOUR GERMAN AND SWISS ZOOS

by Herbert Schifter

Among Berlin Zoo's acquisitions in 1987 were six Guira Cuckoos from the zoo in San Carlos, Uruguay (Reinhard & Blaszkiewitz, 1988). Although they had arrived only in June of that year, by October they had already started to breed in an aviary in the Bird House. An attempt to artificially rear the first three young was unsuccessful but shortly afterwards the adults bred again in a wooden box and succeeded in rearing two young. Dr Reinhard and Dr Blaszkiewitz's report included a photo of a young Guira Cuckoo the first day after it had hatched. In 1988 the Guira Cuckoos nested 11 times and hatched no fewer than 43 young, 32 of which were reared successfully. With so many offspring, the zoo felt able to donate six young to Wuppertal Zoo in Germany and six to Zürich Zoo in Switzerland (Reinhard & Blaszkiewitz, 1989).

At Berlin Zoo the Guira Cuckoos continued to breed successfully in 1989 and that year hatched 42 young, 15 of which were given to other zoos. In the Annual Report for 1989 published in the Berlin Zoo journal *Bongo* Vol.16, there was a photograph of a clutch of four very dark streaked eggs and another photo showed Head Keeper Clemens Kuczynski with a hand-reared bird. In 1990 the Guira Cuckoos produced 25 young. Some of them had to be hand-reared which created no problems for the keepers. The following two years (1991 & 1992) there was no breeding activity but in 1993 they bred again and successfully reared three young. In 1994 seven young were hatched but none of them were reared. This species did not breed again until 2000 when five Guira Cuckoos imported recently from Argentina were donated to the zoo. On that occasion the young had to be hatched and reared artificially. In 2002 three more Guira Cuckoos were reared by their parents and one was reared artificially. In 2003 five Guira Cuckoos were reared and two more in 2004.

In the Bird House at Wuppertal Zoo the Guira Cuckoos received from Berlin Zoo in 1988 reared 10 young in 1989, five of which were sent to

other zoos. Thirteen young were reared in 1990, nine in 1991, seven in 1992 and three in 1993. In 1994, 1995 and 1996 the Guira Cuckoos were less successful, rearing only two young each year but in 1997 they had four young. Only one was reared in 1998 but in 1999 there were no fewer than 12 young. During 2000 three young were reared, there was one in 2002 and five in 2003 and one in 2004, bringing the number of Guira Cuckoos bred at Wuppertal Zoo to 75.

The Guira Cuckoos donated by Berlin Zoo to Zürich Zoo in 1988 started to breed within four months of their arrival, rearing first one youngster and then breeding again in December when four more young were reared. In 1989 a total of 13 were reared at Zürich Zoo but only one was reared in 1990. In 1993 only one male and two female Guira Cuckoos survived at Zürich Zoo. After both females died in 1995 a further male and two females were acquired in 1996. In 1999 Zürich Zoo no longer kept Guira Cuckoos. In 2000 Wuppertal Zoo donated a male and three females to Basle Zoo in Switzerland. They bred there successfully in 2001 and a photo showing four young birds was included in the Annual Report for that year. The Guira Cuckoos continued to breed there in the following years and were still being kept in the collection December 31st 2004.

References

- Coles, D. 1986. *First Breeding Records for Birds Reared to Independence under Controlled Conditions in the United Kingdom*. Published by Dave Coles (website:dcbooks.co.uk).
- Hopkinson, E. 1926. Records of birds bred in Captivity. H. F. & G. Witherby, London.
- Neunzig, K. 1921. *Fremdländische Stubenvögel, Creutzsche Verlagsbuchhandlung*.
- Reinhard, R. and Blaszkiewitz, B. 1988. Bemerkenswerte Ereignisse in den Vogelrevieran des Berliner Zoos im Jahr 1987. (1. Teil). *Gefiederte Welt* 112:233-236. (Schluss) *Gefiederte Welt* 112:261-262.
- Reinhard, R. and Blaszkiewitz, B. 1989. Ornithologischer Jahresbericht 1988 für den Zoologischen Garten Berlin. *Gefiederte Welt* 113:339-341.

In his accompanying letter, Dr Schifter wrote that Neunzig (1921) recorded that Guira Cuckoos were received by London Zoo in 1864 and this species was imported later on several occasions and "in zoologischen Gärten meist vorhanden" (which could be translated as "usually being present in zoological gardens"). On July 22nd 1886 the museum in Vienna received a Guira Cuckoo from Vienna Zoo but it is not known when it was acquired by the zoo. Dr Schifter found another record of a Guira Cuckoo which arrived at Vienna Zoo on November 7th 1901 but survived only to June 14th 1903. He believes that the first recorded breeding may be that by Lord Poltimore in 1911, whose birds reared a single young one (Hopkinson, 1926, listed in Coles, 1986). Dr Schifter saw his first live Guira Cuckoo in 1957 living in the famous Bird House at Copenhagen Zoo, Denmark. He saw another one in 1958 in Wassenaar Zoo in the Netherlands and a further one in 1959 in the Bird House at London Zoo. - Ed.

AN AUTOBIOGRAPHICAL PROFILE

by Bernard Sayers

It is strange that although, since my earliest recollections my life has revolved around livestock and natural history, my parents and sister have no similar predilections. Indeed, at best, they have been disinterested and, more frequently, vehemently opposed to close contact with pets and nature.

I suppose that, in some respects, it was fortuitous that I was born during the latter part of the Second World War. During the war, and for several years afterwards, food rationing dominated our lives and, as is customary during periods of deprivation and adversity, my parents showed considerable resourcefulness in becoming virtually self-sufficient. Local timber was bought and cut into logs; our garden was planted with fruit trees, soft fruit and vegetables; and, of more interest to me, we kept chickens for meat and eggs and, because these attracted rats, we acquired a cat.

Although I was born where I still live, which is close to the town centre of Chelmsford, Essex, until recently our garden was bordered by land belonging to a nearby dairy farm. Neighbours recall me as a tiny tot lugging baskets of windfall apples and carrots rustled from my father's garden into a nearby field and standing surrounded by a jostling circle of 40-50 cows whilst these delicacies were shared around. Of course, in those days livestock, particularly in a semi-rural area, was far more part of everyday life than it is now. Milkmen had horse-drawn carts, much of the farm work was still done by heavy horses and not far from my home there were horse-drawn barges on the Chelmer Navigation Canal. So I was able to set off with apples, slices of bread and carrots to feed these magnificent animals and, sometimes, if I was lucky, the horsemen would lift me up onto a Shire or Suffolk Punch and I was allowed to ride on it for a short distance.

Enchanting though the domestic livestock was, I yearned to have something more exotic. Eventually my parents, somewhat reluctantly, agreed to me saving my pocket money to buy a tortoise. The great day came when in a local pet shop I proudly handed over 7/6 (approx. 37p or US\$0.65) for a Greek Tortoise *Testudo graeca* - indeed it was only about 10 years ago that it died after some 40 years in captivity. A little while afterwards I acquired a guinea pig and occasionally Slow Worms *Anguis fragilis*, Grass Snakes *Natrix natrix* and Common Lizards *Lacerta vivipara*, which I had caught on the surrounding farmland and commons, were kept and admired for a few days or weeks and then released. Unbeknown to my parents, I also kept two Adders *Vipera berus*, which I had caught, but I found them to be timid and reluctant to feed so soon released them. There were Badgers *Meles meles* living nearby and my abiding wish was to acquire a Badger cub. I scoured the surrounding hedgerows and woodland for Badger setts, which were quite

plentiful, and attempted to crawl or reach into them to extract the inhabitants. Knowing, as I do now, how powerful Badgers are, it is a mercy that I was never successful.

By the time I had reached 10 years old, the situation looked pretty bleak. Our cat and the guinea pig had died and, the wartime shortages having ceased, the chickens had been disposed of. My parents remained reluctant to allow my interests in natural history free rein and the highlight of my year was when we climbed into my father's Ford Prefect for a day trip to London Zoo, which, to my mind, was little short of heaven on earth. On TV, I avidly watched George Cansdale, Superintendent of London Zoo, who used to bring various mammals, birds and reptiles to the television studios and Armand and Michaela Dennis who showed their films of African wildlife. What I desperately wanted though was personal involvement and I was allowed to have a tank of tropical fish and start a museum.

It was an era when a lot of grand houses were going out of private ownership and there was very little interest in taxidermy and native weapons and artefacts. Even with my small amount of pocket money, I quickly amassed a considerable quantity of cased birds and fish, big game trophies, native weapons, tom-toms and endless other items which quickly filled the house to overflowing. As a solution, I decided to build a garden shed in which much of my cherished collection would be housed. For, about a year, I did gardening for neighbours, ran errands, did work for local farmers and finally, with money received on my birthday, I had amassed £20 (approx. US\$35) - a huge sum to a 12 year old lad in 1956. A sturdy shed was quickly built and my museum was moved into it, but truth be told, my collecting had been so successful that the shed only accommodated the overspill and my real treasures still filled the house.

Although I was immensely proud of my museum, it still lacked the stimulus and interest of keeping and breeding livestock. It was then that I hit upon a scheme that overcome my parents' refusal to let me keep birds or mammals. I made a magnificent box-style bird cage to practise my carpentry skills even though my parents had emphasised over and over again that I would not be permitted to find an occupant for it. Although I assured them that I had no intention of acquiring any birds, with hindsight, I must admit that my plan showed a high order of duplicity. A local milkman was well known for breeding and exhibiting budgerigars and from him I bought a light green cock. I knew that I could not take it home, but I had a strategy carefully worked out, whereby a neighbour agreed to take temporary custody of the bird and later in the day would call at our home and claim that the budgerigar was an escapee he had caught in his garden and, since he had heard that I had an empty cage, would I please look after it until the owner came forward? Of course, the owner never did appear, and once the budgerigar was settled in my parents could not find a way of disposing of it

so I was allowed to keep it. Soon, my cock budgerigar was pining for a companion, or so I assured my parents, and I was allowed to buy another cock budgerigar, but through my ineptitude - or was it cunning, of which I am now bitterly ashamed - the blue cock proved to be a blue hen. Before long, aged just 12½ years old, I was breeding baby budgerigars for the Christmas trade.

In those days budgerigars were enjoying immense popularity as pets and, at Christmas, babies six to 10 weeks old sold for 30/- (£1.50 or approx.US\$2.60) each. My first nest of four young brought me £6 (approx.US\$10) which I could spend on seed or perhaps extend my stock by another pair. The budgerigars' breeding cage stood on a table in our lounge and my parents were becoming increasingly distraught with their wayward son's activities. My father sat me down and the deal he offered was that if I disposed of my museum and the tropical fish, my garden shed could be converted into a birdroom and I would also be permitted to have a garden aviary. Wrench though it was to dispose of my museum, I agreed, because in my mind I could picture rows of aviaries with macaws, cockatoos, toucans and other exotics. So, the tropical fish and accessories were disposed of and my cherished collection of taxidermy, ethnic and other curios, which filled a large van, was sold to an antique shop for £9 (approx.US\$15). Today the collection would have been worth thousands!

The proceeds from the sale of the tropical fish and museum paid for the materials I needed to build my outside aviary and additional breeding cages. My bird collection quickly multiplied and soon I had a permanent stock of around 30 budgerigars and a pair of Golden Pheasants *Chrysolophus pictus*. The budgerigars and pheasants both bred well and the money I made from selling the young was ploughed back into my hobby and, in addition, I worked weekends and holidays to earn extra money. This income though enabled me to do little better than stand still. It is true that I did gradually add another couple of small aviaries and bought a few common foreign birds such as Village Weavers *Ploceus cucullatus*, known then as Rufous-necked Weavers, Java Sparrows *Padda oryzivora* and Black-headed Munias *Lonchura malacca*, known then as Black-headed Nuns, but the collection fell well short of my dreams. Although I bred Java Sparrows, the others did no better than produce infertile eggs so there was little income to pay for replacements when I suffered the occasional mortality.

In 1960, at the age of 16, I joined the Marconi Company as a technician apprentice. I thought that my wages would provide the funds for major expansion, but how wrong I was. My wages were £3 (a little over US\$5) per week and after weekly deductions to pay for my overalls and tool kit, the cost of bus fares to technical college and paying my mother for my keep, I had very little left to finance the major expansion. Clearly radical action was required.

The solution I hit upon, was to become an importer. I reasoned that dealers bought their stock from the wholesalers mainly in Holland and Belgium, or they received them direct from source. If I obtained birds in this way, they would obviously be cheaper and if I imported a few extra birds, these could be sold at a profit to subsidise the cost of those I kept. So, at the age of 18, I became an importer - albeit in a very small way. The plan worked very well and soon my collection had grown both in terms of the number of aviaries and the number and variety of species they contained. I had Fischer's Lovebirds *Agapornis fischeri*, Indian Ring-necked Parakeets *Psittacula krameri*, Senegal Parrots *Poicephalus senegalus*, Purple Glossy Starlings *Lamprotonis purpureus*, Paradise Whydahs *Vidua* sp. and the *pièce de résistance* - a magnificent pair of Scarlet Macaws *Ara macao*. The macaws cost £60 (just over US\$100), which, at the time, represented three months' wages, but I considered they were worth every penny. I built them a roomy aviary with a well insulated shelter and installed a huge, reinforced nest-box. Both birds were very tame with me and learnt to talk. I thought the world of them. I was, I thought, making progress.

Gradually my collection started to take the shape I had long dreamt about. There was a small pond in the garden with some exotic ducks; a pair of White-winged Trumpeters *Psophia leucoptera* wandered at liberty and there were aviaries with hornbills, toucans, macaws, cockatoos, waders, lorries, foreign crows, starlings and many others.

In addition to importing birds, I was also having problem cases routed to me by dealers. This did not suggest any great expertise on my part, but I have got great patience and I was happy to make enormous efforts in an attempt to establish difficult or sick birds. There were many instances, but two stand out in my memory because both had happy endings. In the first, a dealer in the Midlands telephoned me to say he had received a shipment of Red-billed Hornbills *Tockus erythrorhynchus* which, for some reason, refused to feed. Several had died and the rest looked in a bad way. He asked if he could send the survivors by overnight train, on the chance that I could save them. I agreed and in the morning I received a box, the occupants of which looked a picture of abject misery. There were nine hornbills in the box, two were dead and seven were alive - but only just.

I have always been an avid reader of books connected with natural history, zoological gardens and animal collections and I remembered reading that insectivorous birds are sometimes reluctant to feed directly after capture. A trapper's trick of the trade to overcome this problem is to take a long sliver of bamboo and split the end. An insect is then wedged in the split end and the bird's beak is gently tapped with the end of the sliver holding the insect. Eventually the bird becomes infuriated by being tormented in this way and snaps its beak at the insect. With luck the bird gets the insect in its beak and swallows it. Before long the bird learns the routine and grabs the

insects offered in this way. It is then a gradual process of mixing insects with more conventional insectivorous food until a standard captive diet is being accepted.

The wretched little hornbills were installed in an 8ft long x 4ft high (approx. 2.4m long x 1.2m high) cage. It was summer and after searching surrounding pastureland, I came home with large plastic box full of grasshoppers. I wedged a grasshopper in the split bamboo and tapped the beak of each hornbill in turn. It required great patience, but it worked. The hornbills ate all the grasshoppers. No birds died overnight and each day thereafter things became easier. Within two weeks the transition was remarkable. The seven hornbills were in an outside flight and looking a picture of health. By then they were weaned onto a mixture of turkey pellets, chopped ox heart, a little fruit, proprietary coarse insectivorous food and mealworms. The hornbills had been shipped from Tanzania and we never knew if they had been flown out immediately after capture, fed a specialised diet or what explained their reluctance to feed. I kept a pair and the others were sent to the late Ken Smith who kept an interesting small zoo at Exmouth in Devon.

The second episode involved a shipment of that most spectacularly beautiful of lorries the Blue-streaked *Eos reticulata*. At that time the only pair of Blue-streaked Lories I knew of in the UK, was in the superb collection of lorries and pheasants maintained by Jack Rawlings at Kelling Pines in Norfolk (Jack had made his fortune from Rawplugs, Rawbolts and similar fittings - their trade name derived from his own). Then, quite by chance, a dealer named Alan Butcher, who operated from premises in Sclater Street (otherwise known as Club Row) in the East End of London, imported a large batch of Blue-streaked Lories. Like the hornbills, they too refused to feed (the only time I have experienced this problem with these generally easily managed birds which I later specialised in) and several had died. Alan asked if he could rush the survivors to me in an eleventh hour attempt to save them and I readily agreed.

I knew, of course, that lorries feed primarily on pollen and nectar which they extract from flowers. It was high summer and with the lorries' arrival in mind, I walked round the garden, taking note of where bees were most active. I reasoned that if flowers attracted bees, then lorries would also find them acceptable. The African Marigold *Tagetes erecta* attracted the most bees and therefore I cut several branches and tied them against the perches in the cage. Within two hours Alan arrived with eight lorries which were more dead than alive. Some were so weak that they could not get up onto the perches so I carpeted the floor around them with marigold flowers. In no time they were working the flowers with their brush-tongues and watching them do this gave me an idea. I was not sure how much food value the marigolds had so I prepared some dishes of Stimulite Nectar Solution (made

by Percy Hastings one of the pioneer keepers of hummingbirds and other nectar-feeders). I then fashioned some wicks out of thin strips of linen and pushed one end into the middle of a marigold flower. The other end was left trailing. Then I floated some of the flowers on the dishes of nectar and sat back to see what would happen. The lories were still attracted to the flowers but were sucking up the Stimulite Nectar Solution - all were saved. After a few days' feeding and bathing they were unrecognisable from the pathetic bundles of feathers which had arrived.

Not all of the rescue attempts met with success. In fact two instances were responsible for totally changing the direction of my avicultural activities and left me with my health permanently impaired. Back in those days, before quarantine became mandatory, a friend imported some Amazon parrots from Colombia and when they arrived they were in very poor health. I accepted part of the shipment in the hope that if they were treated with broad-spectrum antibiotics and carefully nursed, I could return them to good health. It is true that, although some died, the other parrots were saved, but I also became very ill with what appeared to be a high fever and severe pneumonia-like symptoms. The family doctor was baffled and although many tests were conducted, no conclusion was reached as to what I was suffering from. Within two or three weeks I recovered and I suppose that the incident did bring one benefit because - whilst sick I lost 2½ stones (35lbs or approx. 15.8kg) in weight. There was no recurrence for about two years when I again succumbed to similar symptoms, but this time they were far more severe and sure enough the second attack coincided with me nursing a shipment of sick parrots from Colombia. Despite exhaustive tests, the problem was never identified although the obvious diagnosis of ornithosis (psittacosis) proved wrong. Again I gradually recovered, but, this time, it took much longer and my doctor advised me to keep clear of freshly imported parrots because he considered another attack might prove very serious. I took his advice and fortunately there has been no further recurrence, though I have been left with a permanent lung weakness.

The episodes with the sick parrots hastened the decision I had been intending to make for some time. I had become increasingly disillusioned with importing wild-caught birds and felt that my involvement in this traffic did me little credit. Therefore, I terminated my involvement in importing wild-caught birds and resolved to concentrate on breeding from the very eclectic collection I had assembled.

By then I was in my mid-twenties and with the arrogance and certainty of youth, thought my knowledge of natural history, and birds in particular, impressive and comprehensive. How wrong I was. Fortunately I had the good fortune to be let down gently by the late John Yealland who was then Curator of Birds at London Zoo. John had been Curator for the Duke of Bedford, had collected birds in West Africa and was the Curator of, what

was then, one of the finest collections of birds in the world. He possessed a prodigious memory and the gift of instant recall, but, like virtually all of the aviculturists I have admired and respected, was quiet and unassuming and would never offer a view unless asked to do so. He very kindly agreed to devote a large part of one day showing me around the huge collection at Regent's Park. Convinced of my own expertise, I ostentatiously named the birds shown to me and, uninvited, offered comments on the country of origin, identifying the sexes, captive breeding records and other information. John must have squirmed, but he said nothing and bore my conceit and arrogance with good humour and patience. He then showed me a pair of birds and a singleton of another species and nonchalantly asked what I could tell him about them? To my shame, I had not the vaguest idea what they were - later I found they were a pair of Piapiacs *Ptilostornus afer* and an ant-thrush *Neocossyphus* sp. John had taught me a salutary lesson and since then I have been acutely aware of how little I know.

John must have forgiven my sins during that first meeting for he became a valued and helpful friend throughout the remainder of his career at London Zoo and throughout his retirement at Binstead on the Isle of Wight. In retirement, John was a plantsman rather than an aviculturist and our correspondence was all about the plants we had established in our gardens. Many a pack of seeds or cuttings of unusual plants were sent to me by John, some flourished, but many of the species failed to survive, because the winters here in East Anglia are much more severe than those at Binstead.

For many years I was an Avicultural Society Council Member. John introduced me to the society, which then met regularly at the Windsor Hotel at Lancaster Gate in London. Although the meetings were perhaps a trifle formal in those days, after dinner there was either a lecture by some avicultural luminary or a *conversazione* which was a rather grand term for chatting amongst ourselves. It was the latter that I particularly enjoyed because the participants were interesting aviculturists of proven ability. Amongst those which spring to mind are Jean Delacour, Arthur Prestwich, Donald Risdon, Jack D'eath, Newton Steel and Len Hill who, sadly, are no longer with us, but one prominent member at that time still possesses one of the finest private collections in Europe - he is, of course, Raymond Sawyer. I was totally outclassed in such company, but I was a good listener and I learnt a great deal.

Towards the end of the 1960s, it was again becoming obvious that a change of direction was called for. My collection was a nightmare to service, in that the occupants of almost every aviary required different food. I had to supply fruit, fish, nectar, mealworms, mice, day-old chicks, many sorts of seed and pellets and endless other ingredients. Some species did breed, although the results were not what they should have been and I was receiving ever more angry complaints from neighbours about the raucous and

penetrating calls of my macaws, cockatoos and hornbills. Therefore, the decision was made to specialise and lories, lorikeets and birds of prey were the chosen subjects.

Lories and lorikeets are an absolute joy to keep. Their colours are unbelievably gaudy, they have extrovert temperaments and are natural born clowns. Give them a length of rope, a ping pong ball or a plastic ball and they will play for hours. Now that I am retired and have more time, I keep a few pairs of lories again, but at the time when they were one of the subjects of my specialisations, this did not really make good sense. Their artificial nectar and fruit diet sours quickly in hot weather which necessitates two freshly prepared feeds a day, with all of the utensils being thoroughly washed. In winter, although the birds themselves are relatively hardy, their food freezes, so to prevent this they need heated shelters. Since my aviaries are scattered around the garden, heating shelters would have been difficult. Also, because of the liquid nature of their diets, their droppings are copious and incredibly sticky. Thus their accommodation needs to be thoroughly scrubbed at least once a week. Back in those days, before surgical sexing, there was also the difficulty or impossibility of visually sexing most lories. This led to several wasted years when I tried to breed from what I believed was a true pair until both birds eventually laid eggs and other apparently bonded pairs which did nothing and I suspect both birds were males. I did breed a few species of lories, but, after a time, sadly reached the conclusion that the lories must go.

The diurnal birds of prey presented different problems, resulting from folk who would not accept their ignorance being allowed to recommend who in the UK should be granted import licences. Just before I was trying to establish my breeding collection of hawks, eagles and vultures, legislation was enacted which required importers to obtain licences for any bird of prey they required. I should emphasise that I fully supported this move because huge numbers of raptors were being imported under appalling conditions and the mortality was absolutely horrific. The problem was that the Department of the Environment (DOE), now the Department of Environment, Food & Rural Affairs (DEFRA), relied heavily upon advice from a prominent falconry organisation that considered breeding these noble birds in captivity was virtually impossible, particularly by non-falconers. This was inexcusable because, even at that time, several species had bred successfully. Even in my collection, three species had reared chicks. Yet I sat through a meeting which was jointly hosted by the organisations advising the DOE at which I had to listen to the most incredible rubbish. To make it worse, it was delivered in a pompous and arrogant manner. Probably the most absurd snippet of wisdom offered was that Peregrine Falcons *Falco peregrinus* would only breed successfully if they could perform their courtship flight and this would entail building an aviary 1 mile sq x 1,000ft

high (approx. 2.5km sq. x 300m high). Well before this revelation, Peregrine Falcons had been bred in captivity in moderately sized aviaries in Germany and Australia.

Although I possessed a few falcons, hawks, eagles and vultures which were imported before licensing was introduced, these included several singletons and unsexed couples. Through the contacts that I had established over the years, it would have been easy for me to import the necessary birds to make up potential breeding pairs, provided I could obtain the necessary licences. Knowing the influence wielded by the falconry organisation advising the DOE and the fact that applications, which stated the applicant was a member of this organisation stood much more chance of success, I applied for membership. I explained that I had no intention of becoming a falconer, but, instead, my interests centred on studying and breeding raptors in aviaries. I received a brusque reply from the secretary, which was a masterpiece of brevity. It stated that, since I was not a falconer, intended to breed raptors in captivity, which apparently was not practical and, most sinful of all, kept birds of prey "behind wire-netting" which, it was inferred, was an heinous crime, my application for membership was refused. Even though some so-called falconers known to me were readily obtaining licences to import Shrikas *Accipiter badius*, Red-headed Merlins *F. chicquera*, Shaheens *F. peregrinoides* and other species, subjecting them to hopelessly incompetent care and losing them within a few weeks or even within days. So my specialisation in diurnal raptors was hardly a towering success. Again I did breed a few and had the pleasure of keeping such magnificent species as the Crested Goshawk *A. trivirgatus*, Pearl Kite *Gampsonyx swainsonii* (which I found to be mainly insectivorous), Crested Caracara *Polyborus plancus* (two males I later sent to London Zoo), Yellow-throated Caracara *Daptrius ater*, Crane Hawk *Geranospiza caerulescens*, Lugger Falcon *F. jugger*, American Kestrel *F. sparverius* and Common Kestrel *F. tinnunculus* (the last three I bred successfully), Bateleur *Terathopius ecaudatus*, Crested Serpent Eagle *Spilornis cheela*, Tawny Eagle *Aquila rapax* and, my pride and joy, a tame King Vulture *Sarcoramphus papa*. The latter species is one I would like to keep again. Mine was a great character and, of course, this species is one of the most arrestingly bizarre of all raptors in appearance. It breeds quite well in captivity.

Eventually I accepted that my attempt to specialise in diurnal raptors was going nowhere and in frustration and a sense of realism, I disposed of them. This just left my owls and these had proved a great success. Not, I must emphasise, due to any expertise on my part, but because of all the many birds I have kept, owls are undoubtedly the most trouble free. I have long said that if an aviculturist cannot keep and breed owls successfully, they should not try other birds, but instead consider collecting stamps. Owls are hardy, easily fed, remarkably resistant to disease when well cared for and

are long-lived with ages of between 20-30 years being commonplace. This takes a lot of heartache out of keeping birds because losing an old friend is always a moment of great sadness and certainly it is necessary to deliver the last rights on fewer owls than any other bird which might be kept. Being nocturnal, they were ideal for me. I was away from home from 8.00am-6.00pm, which meant that in the winter, it was always dark when I was able to attend to my birds. Instead of disturbing roosting birds, I could feed my owls and service their aviaries when they were at their most active.

My introduction to these fascinating birds came when I was about 18 years old. A member of staff at Blackwater Timbers telephoned me to explain that they had just felled an elm *Ulmus* sp. and just before it toppled they saw a Tawny Owl *Strix aluco* fly out of a hollow high in the tree. When the tree hit the ground they checked the hollow and found two downy chicks, which I now realise were about three weeks old. One looked badly injured, but my informant hoped that the other one, although obviously hurt, might survive. I lost no time in collecting the twins and to my distress one died soon afterwards. Fortunately its brother survived and, although the fall left it with a dropped wing and a stiff leg, Hibou (French for owl), as he was christened, lived here for many years and proved to be an able and devoted father - who gave me a rough time when the female had eggs or chicks.

I bought a number of exotic owls from dealers, although, infuriatingly, they were often singletons, others were supplied to me by London Zoo, which was then the most successful collection in the world at breeding owls. Soon I was breeding several species and this opened up other sources of supply. The overseas zoos I approached for additional stock were more sympathetic to my requests once they knew I was successfully breeding owls, particularly since several were much more inclined to offer surplus stock for exchange rather than selling it. Over the ensuing years, I received owls from what were then West Berlin Zoo and Tierpark Berlin (East Berlin), as well as from Copenhagen Zoo, Antwerp Zoo, Winnipeg Zoo, World of Birds, Hout Bay, South Africa, Birdland, Malindi, Kenya and many specialist breeders.

Coincidental with the development of my breeding collection of owls, a chance experience sparked two other interests which have absorbed and fascinated me ever since. Both were prompted by the landmark volume *Parrots of the World* by Joseph Forshaw and William Cooper. Joe Forshaw attended a meeting of the Avicultural Society in London and brought with him a sample section of the book. I was lost in wonderment, his text was more comprehensive than anything I had previously read on parrots and the specimen plate of a Hyacinth Macaw *Anodorhynchus hyacinthinus* by William Cooper made the comparatively few books I already had look decidedly dowdy in comparison. It was after the style of the hugely expensive bird books with magnificent colour plates produced during the 19th century.

With high quality modern colour printing, a lavish book like *Parrots of the World* could be produced at an affordable price. I was hooked and was one of the first customers. It was the start of my serious book collecting. My library now contains more than 8,000 volumes three-quarters of which are on ornithology and aviculture.

When reading Joe Forshaw's *magnum opus*, I constantly saw the curt comment that the eggs of the species were "undescribed". How could this be, I thought, because many of these species had been bred in captivity. The sad truth was that the aviculturists who had enjoyed success had not recorded details about the eggs and none of those that were infertile had been preserved. This realisation coincided with me forming very mixed, in fact diametrically opposed may be a more accurate description, views about natural history museums. I found them immensely interesting and informative and although I recognised the value of reference collections, I also felt an overwhelming sadness that huge numbers of magnificent creatures had been killed to form these collections. The solution suddenly dawned bright and clear - the wastage from captive collections was an obvious source of reference material, which would avoid the destruction of living creatures.

At that time, Dr Colin Harrison, a fellow Avicultural Society Council Member, was keeper of the oological section of the British Museum (Natural History). I approached Colin with my idea which he considered a good one, but impractical because there was only a small staff at the museum and they did not have the time or resources to deal with captive casualties. In the case of unsuccessful eggs, he did not think the staff would welcome blowing addled eggs and dealing with eggs containing rotting, dead chicks. Fortunately, the Royal Scottish Natural History Museum is now vigorously tapping this source of material and its dynamic Curator Dr Andrew Kitchener has obtained some very useful material in this way. However, back in 1972, the only solution seemed to be for me to start collecting this material. Initially, progress was rather slow, but once my contacts in zoos and private aviculture realised I was serious and determined, they provided me with marvellous assistance. My collection of eggs now extends to more than 60,000 specimens representing more than 2,000 species and subspecies and my skin collection contains around 500 species. Here I must emphasise that not a single viable egg has been destroyed and not a single bird has been killed in assembling this collection - all of this material would otherwise have been binned. At my peak, I was collecting and blowing 5,000 eggs a year, mostly in the months of May-July. Every Sunday I would drive a 400-mile (approx. 640km) circuit collecting eggs from up to 10 collections and on some of these occasions I returned home with more than 1,000 eggs in varying stages of volatility. The race was then on to blow and catalogue the eggs before they exploded. Many times I worked through most of the night and left for the office at 8.00am the next morning. I am still actively collecting

although, largely due to pressure of space and my declining energy levels, I only add about 1,000 eggs each season now.

Reference skins pose fewer problems because carcasses can be frozen until time permits their preparation. Of course, the real problem is the space required to house an extensive collection of skins. Even more space consuming are the large glass cases housing the really spectacular specimens I have mounted. We have many cases of magnificent species around the house, which constantly remind me of the splendours of nature.

Although I encountered my share of failures and disappointments, my owl collection quickly became established and quite productive. I have now successfully bred over 1,200 owls of 30 forms and I believe eight of these may have been first breedings in the UK, i.e. Kenyan Wood Owl *S. woodfordii nigricantior*, Boobook Owl *Ninox novaeseelandiae*, Striped Owl *Rhinoptynx clamator*, Brazilian Rusty-barred Owl *S. hylophila*, Chaco Owl *S. chacoensis*, Barred Owl *S. varia*, Tengmalm's Owl *Aegolius funereus* and Ferruginous Pygmy Owl *Glaucidium brasilianum*. However, I quickly realised that what I was doing was merely dabbling with the captive breeding of owls in a very amateurish way.

A small private collection can achieve almost nothing alone therefore I conceived the idea of managing an extensive captive breeding programme based on placing birds on breeding loan with responsible collections, both public and private. The whole collection was to be coordinated and managed by me - or so I naively thought. It was obvious that to inject new vigour into owl breeding in the UK, it was necessary for new species to be imported and new bloodlines obtained to avoid disastrously inbreeding the species already held in this country. During the 1970s and 1980s I imported large numbers of owls, all of which were captive-bred by reputable collections. This programme was given an enormous boost when Frank Keens joined me and shared in the work involved and the cost of financing this undertaking. Also, I must give credit to Murray Dishington and Tony Turk of the now defunct Lilford Park Aviaries who built a quarantine facility for owls and provided help and support in so many ways. Peter Olney and his staff at London Zoo were also most supportive and helped by quarantining some of the shipments. This programme certainly provided the stock which, had it been used to best effect, should have enabled us to have established populations of many species of owls which would have prospered long term.

The agreement signed by the custodians of the loaned owls made it clear that records should be kept and a copy passed to me every year for collation. Dead owls and failed eggs were to be retained for reference purposes. To finance further shipments of new stock and expand the breeding programme, half the progeny bred from the loaned birds was to be returned to me either to be loaned or sold. The remaining half would belong to the borrowers.

Some of the friends who accepted loaned birds did very well with them and behaved impeccably. Prominent in this category were Tony Turk, Frank Keens, Alan Smith and London Zoo plus a few others. However, most of the owls I had gone to so much trouble and expense to import were squandered. Once passed over to the borrowers, they were never heard of again. Enquiries, which sometimes had to be conducted covertly, revealed that the loaned owls had escaped, were stolen, were housed in mixed aviaries where larger companions killed them or were otherwise maintained carelessly and, even more unforgivable, many were given away or even sold without my knowledge. This was disappointing in the extreme, but disappointment soon turned to nightmare. My collection is small and confined to a suburban garden so I am never blessed with vacant aviary space. It quickly became apparent that when many of the custodians of the loaned owls encountered problems (i.e. divorce, shortage of food, collection closure and sundry other reasons), they picked up the telephone and demanded that I take the birds back immediately. Not only was my plan a miserable failure, but the associated problems were a constant source of worry. I had to admit defeat and wind down the operation. From a peak of having over 150 owls out on breeding loan, I now have only a handful.

In 1988 I visited Thailand on a tour of the national parks and zoological collections. Quite by chance I met a Thai girl, Nongnut Promsawat (who prefers to be called Wattana), who spoke several dialects and very adequate English and who acted as interpreter and guide for the duration of my stay. Thai animal keepers have a remarkable rapport with their charges and go in with virtually everything, which can be rather unsettling to a western visitor when they receive an invitation to go in and meet potentially dangerous animals. Wattana took it all in her stride and remained at my side when we were invited to stroke a magnificent adult male Tiger *Panthera tigris*, pat a 3m (almost 10ft) Siamese Crocodile *Crocodylus siamensis*, handle a 5m (16ft or so) Burmese Python *Python molurus bivittatus*, feed sugar cane to huge bull Asian Elephants *Elephas maximus* and act as a nursemaid to an enchanting, but rather boisterous, Orang-utan *Pongo* sp. Although Wattana likes animals and is good with them, her abiding passion is plants and this, of course, coincides with another of my lifelong interests.

Wattana joined me here in England in 1992. In marked contrast to the staff at the British Embassy in Bangkok, those at the Thai Embassy in London could not have been more pleasant and helpful and we were married there under Thai law in March 1993 and under English law in Chelmsford the following month. Wattana and I have been blissfully happy ever since. Not only does she encourage me in my pursuits, but helps by blowing stinking, added eggs and chopping up mice and rats to feed to baby owls.

What is the future of owl keeping and breeding in the UK? Sadly, my current view is one of uncertain pessimism. To guarantee the long-term

prosperity of all species that are currently represented in UK collections, we need a great deal more aviary space and dedicated keepers. Currently, we have approximately 40 species and subspecies which, in theory, it should be possible to establish. To keep each form going long-term would need the provision of at least 50 aviaries for each and to allow for housing young stock and non-breeding birds, 100 aviaries per species or subspecies would probably be more realistic. I very much doubt that amount of space is available, in fact I believe the amount of space is declining. As zoos experience increasing financial constraints, some close and others, quite understandably, are forced to rationalise their collections. Similarly, the private sector is also experiencing its share of difficulties and interest is declining.

If we cannot achieve total independence by maintaining large gene pools of each form, it will be necessary to occasionally inject wild blood into smaller and, by definition, more inbred populations. This hardly seems feasible when, for very good reason, importing wild-caught owls is becoming increasingly difficult. Indeed, from many countries, it is already virtually impossible. Yet a viable alternative looks equally improbable. The sad fact remains, that every time a species of owl approaches the threshold of being permanently established, it is written off as commonplace, interest wanes, young stock becomes nearly impossible to place, breeders become discouraged and the population plunges down a spiral of decline.

Fortunately, we have three organisations - The World Owl Trust (WOT), The Owl Taxonomic Advisory Group (OTAG) and the International Owl Society (IOS) - to represent and help owl keepers. They have done good work and I am sure will continue to do so. However, they have not proved nearly as dynamic as I had hoped. All three organisations should be concentrating on averting future crises, which may otherwise overtake us. The situation is by no means hopeless, but I would like to see more clarity of purpose displayed by the grandees of our absorbing interest.

Bernard Sayer's Autobiographical Profile was published originally in Tyto, the magazine of the International Owl Society (IOS), and is reproduced here by kind permission of the IOS. In addition to his owls and lories, Bernard now keeps a few pairs of pheasants, parakeets, curassows and softbills.

BREEDING THE GOLDEN-BREASTED BUNTING

by Jim Jerrard

When visiting the Stafford Show autumn sales day in 2004, I noticed that a dealer had some Golden-breasted Buntings *Emberiza flaviventris*, a species I had not seen for some years. There were six birds in all, split into pairs. I had a chat with the dealer about sexing them and asked about the history of the birds, but all he could tell me was that they were African buntings and that he had heard a couple of them singing. All six looked in very good condition and had perfect feathering. So, after a walk around the hall, with the buntings still on my mind, I went back and bought all six in the hope that there was at least one pair amongst them from which I could attempt to breed in 2005.

On arriving back home, I kept the birds caged in the same pairs as they had been at the show. I gave them a solution of colloidal silver, millet seed and a few mealworms. The next morning all six birds looked fine.

At the start of 2005, I separated the birds and housed them in single cages and waited to see what would happen in the spring. Not much happened until late April, when the birds started to call - it was a musical call which I took to be their song. My heart sank as I thought I had six males. Then in mid-May one of the birds started to develop a proper song and its colours started to change to a deeper hue - its head markings turned blacker and its breast became more golden. At the same time one of the other birds started to call continually, so, believing they were a male and a female, I placed them together in a flight measuring 6ft x 3ft x 6ft (approx. 1.8m x 0.9m x 1.8m). As I was undecided about the other four birds, I placed them all together in a flight of the same dimensions.

In mid-June the female of the pair started to carry nest material and while the male sang to her and displayed, she built a deep nest out of sisal and hay in a canary nest bowl about 6ft (1.8m) above the ground. The first egg appeared on June 22nd and there was another the next day. The day that the first egg was laid I never saw the male or female go anywhere near the nest, but the female started to sit as soon as the second egg was laid. One chick hatched on July 3rd and the other egg was clear. The chick, which I ringed (banded) when it was seven days old, did well, being fed by both parents, and was reared successfully.

On July 18th the female laid again and began to sit after the second egg was laid. On inspecting the nest and eggs on day five, I found there was a third egg in the nest. Two chicks hatched on July 30th, but sadly both died at five days old. The third egg was clear. The pair did not nest again.

The four birds I put together proved to be three males and one female.

In mid-June as I sat watching the four birds, I noticed one was carrying nest material, so I separated it and one of the remaining three and caged them. The female made a nest in an open nest-box, which I had stuffed with hay. She made a deep depression in the middle, which she lined with sisal and dog hair. On June 29th she laid the first egg and began sitting after laying the second egg the next day. Both eggs hatched on July 10th but when the chicks were three days old they were thrown out of the nest.

On July 16th the female laid again and again began sitting the next day after she laid the second egg. This clutch of eggs hatched on July 28th. My friend Sean Fitzpatrick ringed the chicks for me when they were seven days old. They left the nest on August 6th at nine days old.

By the time the chicks were 18 days old on August 15th, the female had laid again. There were three eggs in this clutch and the female started to sit after she had laid the second egg. On August 26th two of the eggs hatched



Adult male (left) and female (right).

and the next day, August 27th, the third egg hatched, but this chick did not survive. When the remaining two chicks were seven days old, they were ringed by Sean Fitzpatrick. They left the nest on September 5th, when they were nine days old. Both chicks later became self-supporting and all five were reared successfully. They were all ringed with IOA rings size D.

The adults eat millet and grass seed. The five chicks were reared on



About 15 days old.

buffalo worms, fruit flies, small crickets and a few waxworm grubs. When they got to about 14 days old I noticed that the parents started to crack millet seed and feed it to them. Eggfood was ignored.

The young were dull replicas of their parents. They lacked the golden breast, instead the upper breast was grey/brown with dark streaking and the lower breast was a dirty cream colour, with the flanks and vent area off-white (see photo above).

The eggs were white with speckles around the larger end and reminded me very much of the eggs of the Goldfinch *Carduelis carduelis*. The incubation period was 10-11 days and the young fledged at nine days old.

If any members keep this bunting I would like to hear from them.

BREEDING THE PURPLE GLOSSY STARLING

Lamprotornis purpureus

by Anneka Smith and Jim Schofield

We were given our first Purple Glossy Starling, together with two Blue-eared Glossy Starlings *L. chalybaeus* and a Red-tailed Laughingthrush *Garrulax milnei*, in the summer of 2003. These were housed with a group of Japanese Quail *Coturnix japonica* and a pair of Golden Pheasants *Chrysolophus pictus* in an aviary 8ft x 14ft x 6ft 6in high (approx. 2.5m x 4.2m x 2m high). Both ends of the aviary, the back and two-thirds of the roof lengthways are solid, the rest of the roof and the front are covered with 1/2in (13mm) wire netting. The aviary has an apex roof, which enables birds to roost sheltered from wind, rain and overhead predators. The floor is covered with wire netting to exclude burrowing vermin, and on top of it is a deep layer of bark chips for drainage, aesthetics, and to encourage foraging behaviour. There is a small apple tree in the aviary and tree branches are provided for perching. Two nest-boxes, one 10in x 10in x 1ft high (approx. 25.5cm x 25.5cm x 30.5cm high) with a 1 1/4in (32mm) diameter hole, and the other 8in x 8in x 10in high (approx. 20.5cm x 20.5cm x 25.5cm high) with a 1 1/8in (28mm) hole, are screwed to the back and end of the aviary respectively, at opposite ends.

In the spring of 2004, the starlings became very vocal, with an enormous repertoire of calls, then unexpectedly one of the Blue-eared Glossy Starlings killed the other. The remaining two starlings (the Purple and the Blue-eared) began shredding palm leaves, which along with straw and feathers, they deposited in the larger of the two nest-boxes. Within a few days, the box was one-third full, with a definite bowl-shape having been made in one of the back corners. At that stage, we increased the supply of mealworms, and the starlings continued to build, even plucking feathers from the quail for the purpose. Two green eggs were laid on consecutive days, but within a week had disappeared without trace.

Two weeks passed, during which one of a recently purchased pair of White-headed Black Bulbuls *Hypsipetes madagascariensis* was killed by the Blue-eared Glossy Starling, so the surviving bulbul and the laughingthrush were moved elsewhere. At that stage we had the opportunity to exchange the misbehaving Blue-eared for a second Purple Glossy Starling, a larger bird than our original one, with a comparatively massive head and bill. Although it did not call as often or as loud as the male Blue-eared had done, we were fairly certain the new bird was a male. We kept it caged for a few days to check its health and to give the two birds the chance to call to each other. During that period three eggs were laid in the same nest-box,

confirming that the starling in the aviary was a female. Doubtful as to the fertility of the eggs, we nevertheless further delayed introducing the new bird. After 13 days incubation, two of the eggs hatched and the chicks survived for two and a half weeks on a diet of mini mealworms, spiders, waxworms and small black crickets. At the time of their death they appeared (allowing for their juvenile plumage) to show characteristics of both species.

Following the introduction of the new male, there was no further nesting attempt that year.

On June 2nd 2005, having returned from university for the summer, we took over the care of our small collection, which in our absence had been cared for by Anneka's parents. We started to feed the birds a lot of livefood and on June 6th, both starlings started building in the same box as the previous year. Feathers, shredded palm leaves and straw occupied the bottom one-third of the box, in a corner of which a neat cup had been made. The first egg was laid on June 12th and three others followed, each laid on consecutive days. The female incubated the eggs from dusk to dawn. She was never seen to enter or leave the nest-box during the day and the male was never observed entering the nest-box at all during incubation.

We continued to provide about 40 mealworms a day as well as the usual softbill food and fruit, which included strawberries, grapes and apple. On June 29th all four eggs hatched. Hoping that the young would not die of malnutrition, we provided as much livefood as we could find in the garden and always ensured there were mealworms left in the dish after each feed. We supplemented the mealworms with spiders, ants, ant pupae, woodlice and even the odd centipede. The use of mini mealworms was stopped after the parents showed a definite preference for feeding the young standard sized mealworms. These were fed to the young in large quantities, while only a few woodlice were taken into the nest-box. All food was carefully prepared by the parents, who first squashed the livefood along its length, back and forth a couple of times with their beaks, and often also hit it against a rock or perch.

A phone call to Avicultural Society Council Member Stewart Pyper provided some much appreciated advice and encouragement.

Having checked the nest each day, we realised that two of the chicks were significantly smaller than the other two. One was away from the nest and seemed dead. The other was the same size and not gaping. We removed both of them from the nest-box and placed the dead-looking chick in an incubator and the other one in a heated box. The dead-looking chick recovered to the extent that it started "cheeping" and gaping. We tried feeding both chicks with a mixture based on one advised by Meaden (1979). It consisted of softbill food, crushed mealworms and lettuce. Placing the chicks under a heat lamp in yoghurt pots lined with kitchen towel, we were hopeful



Chicks at 14 days old.

we had caught them in time. The weaker chick swallowed a little food and the stronger of the two grabbed food off the end of a teaspoon. However, the following morning the weaker chick was dead and the other had vomited. It ate very little more and died during the course of the day.

Rather disheartened, we concentrated on the remaining two chicks. At eight days old they had almost doubled in size from that of two days previously. Their eyes had just started to open and they no longer replied to our whistles when we put mealworms in the dish. We added a wider variety of livefood to the menu. This included a few waxworms each day, which were usually fed to the chicks before the mealworms. Mini crickets were snatched rapidly by the parents before the crickets could leap out of the aviary to freedom. We also decided to add vitamin and mineral supplements to both the water and food. The mealworms were kept on a diet of Weetabix breakfast cereal, along with carrot, lettuce, bread, softbill food and hard-boiled egg to ensure a decent nutritional content.

On July 17th, at 18 days old, the chicks started to lean their heads out of the nest-box and call for food. By the 21st, the parents were encouraging them to reach out of the box. They would feed a few mealworms to them and then sit back and call the young. On July 22nd, the larger chick left the box. It flew erratically at first, crashing into the wire mesh and looking uncertain on a perch. However, it was never seen on the floor. The following day, the second chick left the nest.

They had glossy green wings, but dull black heads and bodies. Their eyes were also black, in contrast to the striking yellow and black eyes of the



Eighteen days.

adults. Both parents continued to feed the young, passing them mealworms from the dish to where they sat. At about five weeks old, after the adults had rebuilt their nest and laid a further three eggs, the chicks started experimenting with feeding themselves. They were eating livefood and softbill food by the time this clutch of eggs was due to hatch on August 19th.

Incubation followed the same pattern as before, but this time the eggs failed the hatch and were eventually found discarded on the floor of the aviary. When broken open, they appeared to have been infertile. We thought this was the end of our starling adventure for 2005, so when we returned from holiday on September 10th, we were surprised to find two warm eggs in the nest-box. These hatched on September 18th, but the chicks survived only a few days. While the parents had been preparing livefood for the new chicks, the older offspring had been rapidly devouring what mealworms were left in the container. These two young Purple Glossy Starlings are now in a separate aviary, from which they sometimes call back and forth to their parents, but continue to feed themselves and develop well. Meanwhile, the Golden Pheasants, which had been removed from the aviary when the male starling started dive-bombing them, have now been returned to the aviary, and peace reigns once more.

Reference

Meaden, F. 1979. *A Manual of European Birdkeeping*. Blandford Press, Poole.

CHESTER ZOO'S SICHUAN BIODIVERSITY CONSERVATION PROGRAMME: SUPPORT FOR BROADLEAF FOREST ENDEMIC BIRDS

by Roger Wilkinson, Simon Dowell and Dai Bo

Chester Zoo works in partnership with a number of scientific and conservation organisations in China and works collaboratively with the Sichuan Forestry Department on projects that include or focus on threatened birds. This is a major component of Chester Zoo's larger China Conservation Programme which also includes work with the Yellow-throated Laughingthrushes *Garrulax galbanus* in Wyuan and Simao (Wilkinson et al. 2004), technical exchanges with Chengdu Giant Panda Breeding Base, Chengdu Zoo and Beijing Zoo and support for scientists associated with Sichuan University.

Southern Sichuan Biodiversity Conservation

The current broadleaf forest conservation programme is a partnership between the North of England Zoological Society - Chester Zoo, the Sichuan Forestry Department (SFD) and the Liverpool John Moores University (JMU). This evolved from a project initiated by Dr Simon Dowell of JMU and Dai Bo of SFD that focused on the endangered endemic Sichuan Partridge *Arborophilus rufipectus*. Dr Dowell was then chair of the IUCN/BirdLife International/WPA Partridge, Quail and Francolin Specialist Group and the Sichuan Partridge project was initially supported by the World Pheasant Association (WPA). The present project is supported by the North of England Zoological Society with additional funding support from Mr James Goodhart.

The Chinese subtropical forests endemic bird area (EBA) that includes the range of the Sichuan Partridge is also home to five restricted range endemic passerines. These are the Omei Shan Liocichla *Liocichla omeiensis*, Red-winged Laughingthrush *G. formosus*, Gold-fronted Fulvetta *Alcippe variegaticeps*, Silver Oriole *Oriolus mellianus* and Emei Leaf Warbler *Phylloscopus emeiensis*. The Omei Shan Liocichla, Gold-fronted Fulvetta and Silver Oriole are all listed as Vulnerable (BirdLife International, 2000). The Red-winged Laughingthrush was previously listed as Near-threatened (IUCN, 1996) but is now considered to be of least concern. The Omei Shan Liocichla and Red-winged Laughingthrush have been held in a number of European zoos and are included in the EAZA Passerine TAG Regional Collection Plan. Both of these attractive passerines have been held at Chester Zoo and together with the Red Panda *Ailurus fulgens* offer bridges to link these ambassadors in our zoo collection with field conservation and research.

Chester Zoo has been supporting biodiversity conservation in southern

Sichuan since 2001. Roger Wilkinson and Simon Dowell made visits in early August 2002, May 2004 and in May 2005, accompanied by Dai Bo who manages the programme in Sichuan (Dowell & Wilkinson, 2004, 2005). These visits included formal and informal management meetings with forestry staff at all levels and for all reserves, trekking with staff in these reserves and participating in faunal surveys. Two reserves which we have particularly focused on are the Laojunshan Nature Reserve and the Mamize Forest Reserve. As a direct result of the visit to the southern Sichuan sites in 2004 we have extended this support to also include the newly protected Heizhugou Nature Reserve.

Laojunshan Nature Reserve, Pingshan County, Sichuan

This is an area of broadleaf hill forest that includes a temple site frequently visited by pilgrims. Both the Omei Shan Liocichla and Red-winged Laughingthrush are frequently encountered in the reserve which is also an important area for the Sichuan Partridge. The density of Sichuan Partridges in Laojunshan Reserve, which was previously estimated at ca. three pairs for every 2sq km (approx. $\frac{3}{4}$ sq. mile) of suitable habitat, is as high there as anywhere else within its limited range.

Chester Zoo's financial support has allowed training for all reserve staff in basic biodiversity management including animal and plant identification. The Director has received training in land use management and other senior staff members have been trained in GIS and ranger skills. This has been hand in hand with the provision of essential infrastructure including office furniture and a computer for the reserve office, two motorcycles to facilitate the rangers' access to remote areas of the reserve, waterproof clothing, cameras and binoculars for field staff and most recently the complete refurbishment of a former forestry farm building as a field station. This field station known as the Xintianzui Conservation Centre now provides offices and accommodation for field staff.

This support has enabled this former local nature reserve to be upgraded to a provincial level reserve and as a direct result of this project the reserve will be extended to include surviving tracts of forest that will double its size to over 70sq km (27sq miles). The Director of the reserve has recently prepared a management plan which will be used in an application to further upgrade the reserve to national status. If successful this may open up funding sources from central government previously unavailable to this reserve.

Birds observed by us at Laojunshan included Crimson-breasted Woodpecker *Dendrocopos cathpharius*, White-throated Laughingthrush *G. albogularis*, Red-tailed Minla *Minla ignotincta*, Golden-breasted Fulvetta *A. chrysotis* and Black-headed Sibia *Heterophasia capistrata*. The 'Spectacled Warblers' *Seicercus* spp. have been recently the subjects of



Roger Wilkinson

Laojunshan Forest Reserve.

taxonomic revision and it remains to be confirmed which of this complex occur in the reserve. During our visit in 2005 we found from counts of calling birds that both the area occupied by and the density the Sichuan Partridge had increased since our earlier visits and believe this to be a direct result of improved management and protection in the reserve. The forest also has good numbers of the endemic Dove Tree *Davidia involucrata* which can be enjoyed in flower in May.

Recently this reserve has received visits by local and adventurous foreign birders. Anyone considering a visit is advised to first contact one of



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Sichuan Partridge.



Dai Bo, Roger Wilkinson and Simon Dowell with members of staff at Laojunshan Forest Reserve.

the authors, as arrangements for access must be made through Dai Bo at the Sichuan Forestry Department, who can facilitate such visits.

Mamize Nature Reserve, Leibo County, Sichuan

This diverse and extensive reserve covering over 380sq km (145sq miles) and ranging in altitude from 1,300m-3,800m (approx. 4,265ft-12,500ft) includes a wide range of habitats and species. Broadleaf forests at lower elevations give way to conifer forests that in turn are replaced by bamboo and rhododendron thickets with juniper scrub and alpine meadows at higher altitudes.



Omei Shan Liocichla.

Roger Wilkinson

Chester Zoo funding for Mamize has supported staff training and infrastructure improvements similar to those outlined above for Laojunshan. This year we agreed additional community support through the purchase of two thoroughbred bulls to help improve local cattle. These bulls will be owned by the nature reserve and used as stud bulls in return for the cattle owners' agreement not to graze their stock inside the nature reserve. The local people in the area belong to the colourful Yi minority. Although they are relatively poor, their hospitality impressed us on each of our visits, when we were most warmly welcomed with local food, locally brewed beers and spirit and, in the evenings, traditional singing and dancing.

Faunal and floral surveys have revealed the reserve to not only be diverse in terms of its birds but also to contain 51 vertebrates and 18 flowering plants listed as protected by the Chinese Government. These include the Giant Panda *Ailuropoda melanoleuca*, Red Panda and Takin *Budorcus taxicolor*. This has already resulted in the reserve being upgraded from local to provincial status. A management plan has been completed and we are confident that the reserve will be upgraded to national level with significant funding becoming available on account of it holding Giant Pandas.

On our first visit in 2002 we found Red-billed Chough *Pyrrhocorax pyrrhocorax*, Oriental Skylark *Alauda gulgula* and Upland Pipit *Anthus sylvanus* on the upper alpine slopes. Farther down the mountains we heard Lady Amherst's Pheasant and amongst many other birds saw both Chinese Babax *Babax lanceolatus* and the Black-faced Laughingthrush *G. affinis*. Around our base camp in Gudui township commonly seen birds included Grey Wagtail *Motacilla cinerea*, Black-billed Magpie *Pica pica*, Common Rosefinch *Carpodacus erythrinus* and Daurian Redstart *Phoenicurus aureus*.

The weather was generally good for our visit in May 2004 although on one night in the reserve there was rain with snow on the highest ridges and mountains. Over 60 bird species were seen including two fine male Lady Amherst's Pheasants *Chrysolophus amherstiae*, White-bellied Redstart *Hodgsonius phaenicuroides*, Chestnut-headed Tesia *Tesia castaneocoronata* (then a new record for the reserve), Grey-hooded Parrotbill *Paradoxornis zappeyi*, Dark-breasted Rosefinch *C. nipalensis*, Spot-winged Rosefinch *C. rhodopeplus* and Grey-headed (Bevan's) Bullfinch *Pyrrhula erythaca*. A wide variety of flowering plants were seen and photographed including several species of *Rhododendron* and *Azalea*.

In 2005 again we frequently heard and had excellent sightings of Lady Amherst's Pheasant and as in previous years saw Spotted Nutcracker *Nucifraga carocatactes*, Red-winged Laughingthrush and Elliot's *G. elliotii*. For warbler enthusiasts Mamize is heaven with a confusing variety of both leaf and bush warblers. Notable amongst these are the Ashy-throated Leaf Warbler *P. maculipennis* and Aberrant Bush Warbler *Cettia flavolivacea*. A

super male Rufous-bellied Niltava *Niltava sundara* proved ample compensation for the inconvenience of collecting leeches on our boots and trousers.

Heizhugou Nature Reserve, E'bian County, Sichuan

Heizhugou Nature Reserve is a recently protected provincial status reserve covering ca. 630sq km (approx. 233sq miles) and bordering Dafending Giant Panda Reserve. This reserve supports populations of a number of key species of endemic passerines including Omei Shan Liocichla, Red-winged Laughingthrush and Emei Leaf Warbler. The Sichuan Partridge has also been recorded in the reserve and it is believed that both Giant and Red Panda may be present but confirmation is required. An area of the reserve has already been developed for ecotourism in association with a spa resort in the main river valley. Following our visit in 2004, Chester Zoo funding to this developing nature reserve has supported training for one of the field officers and the purchase of a number of essential items such as binoculars and field guides for bird identification.

Ertan Reserve, Panzihua area, southern Sichuan

Although not one that we currently support, we visited this reserve in 2004 following reports of the occurrence there of the Sichuan Partridge - some 300km (186 miles) south of its known range. Our visit confirmed our suspicion that it may have been mistaken for the very similar Common Hill Partridge *A. torqueola*, previously unknown in this reserve and with our record representing an extension of its known range. The forest is very different from that in the other reserves we visited further north, with conifers on the middle slopes and most of the broadleaf trees at higher levels. Birds we saw there included White-bellied Woodpecker *Dryocopus javensis*, Yunnan Nuthatch *Sitta yunnanensis*, Chestnut-bellied Rock Thrush *Monticola rufiventris* and the Hill Blue Flycatcher *Cyornis banyumas*.

Further support

For selected reserves, plans for further support will be facilitated through a memorandum of understanding (MOU) that was agreed in May 2005 between the North of England Zoological Society - Chester Zoo and the Sichuan Forestry Department, Chengdu, for continuing support through to 2007. Objectives for this programme include the development and linking of a network of broadleaf forest reserves that will secure the future of the endemic birds together with that of other fauna and flora. We plan to achieve this through reserve support including staff training together with assistance for local communities through developing the sustainable use of forest products and supporting community education.



Simon Dowell

Grey-headed or Bevan's Bullfinch.

References

- BirdLife International. 2000. *Threatened Birds of the World*. Lynx Edicions and BirdLife International, Barcelona and Cambridge, UK.
- BirdLife International. 2003. *Saving Asia's threatened birds: a guide for government and civil society*. BirdLife International, Cambridge, UK.
- Dowell, S. and Wilkinson, R. 2004. *Sichuan Forest Conservation Project - Visit Report May 2004*. (Unpublished report available from authors).
- Dowell, S. and Wilkinson, R. 2005. *Chester Zoo/Sichuan Forest Department Sichuan Forest Biodiversity Project. Summary Report on visit to the field area, May 2005*. (Unpublished report available from the authors).
- IUCN. 1996. *1996 IUCN Red List of Threatened Animals*. IUCN, Gland, Switzerland.
- IUCN. 2001. *IUCN Red List Categories and Criteria: Version 3.1*. IUCN Species Survival Commission. IUCN, Gland, Switzerland and Cambridge, UK.
- Wilkinson, R, Gardner, L., He Fen-qi and Wirth, R. 2004. A highly threatened bird - Chinese Yellow-throated Laughing Thrushes in China and in Zoos. *International Zoo News* Vol.51/8 (No.337):456-469.

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NOTES ON THE BENGAL EAGLE OWL

by Philip Schofield

The Bengal Eagle Owl *Bubo bengalensis* is now accorded specific status, having formerly been regarded as a subspecies of the Great Eagle Owl *B. bubo*. It is also known as the Rock Eagle Owl, reflecting some of its likely habitat in the wild state. Yealland (1971) referred to it nesting “under rocks or overhanging ledges” and of a partly grown young bird having wandered some way from the nest in the shade of a bush. Although a large owl, the Bengal is about a third smaller than the average Great Eagle Owl and is coloured various shades of brown, with darker streaking on the breast and paler marbling on the wings, particularly prominent on the male of my pair. The markings are sufficiently variable for the four birds currently in my possession to be easily distinguished from each other. Adult birds have a deep orange iris, which is yellow in the young. Two young birds in my possession, at 12 and eight months of age respectively, have eyes almost as dark as those of their parents.

Although imported as early as 1919, the first breeding in the UK of this owl appears to have been at Linton Zoo in 1973. I believe unrelated birds have been imported since then, so it is to be hoped that our captive stocks are not unduly inbred. My friend and fellow Avicultural Society Council Member Vaughn Sargent acquired a pair in the early 1980s, of which one bird is still alive and breeding, paired to a new mate following the death of its original partner. Many young Bengal Eagle Owls have been reared over the years in Vaughn’s aviaries, mostly by the parents, although some have been hand-reared when potential purchasers required tame, handleable birds. (Apparently, if young owls are left with their parents for the first three weeks and then hand-reared, they are sufficiently tame to be handled and even flown free after appropriate training. Taken from their parents any earlier, they can become unduly fixated on people, potentially aggressive when sexually mature, and unable to recognise another owl as a potential mate). One of these hand-reared birds was returned to Vaughn early in 2004, due to a change in her owner’s circumstances. As she had not been handled for some time, she had become aloof and somewhat defensive towards people. I first saw this bird incubating infertile eggs on the floor of the aviary she was sharing with Vaughn’s aged male Snowy Owl *Nyctea scandiaca*, hatched at Jersey Zoo in the 1970s, and long retired from breeding.

Vaughn offered me the female Bengal Eagle Owl and, having hovered for some time on the brink of keeping owls, I accepted it. I also agreed to temporarily house the male Snowy Owl, and installed them in their new aviary on May 2nd 2004. This aviary is hexagonal, each side being 6ft

(1.8m) in length, giving a width of more than 12ft (3.6m) and adequate flying space. The back and adjoining two sides are of solid wood, the front three sides are covered with wire netting. The aviary is 8ft (2.4m) high, with a ledge some 1ft 6in (46cm) wide running along the back. The ledge is covered with a 2in (5cm) deep layer of wood-based pelleted cat litter (to act as a nesting substrate and absorb moisture from excreta and uneaten food) and has a solid roof, which projects sufficiently to keep off driving rain. The rest of the roof is open wire; this has the disadvantage of possible infection from wild birds overhead, but has the advantage of allowing the ground to be naturally cleaned by the weather. The owls are also able to sit out in the rain if they want to. They also have an uninterrupted view of the sky and seem to derive a lot of interest from watching birds flying over. The ledge has a 4in (12cm) lip along the front, to retain the litter, eggs and owlets. Along the top of the lip, which is planed timber, I have nailed a straight branch of Elder *Sambucus niger*, to provide a more comfortable perch. Two sections of telegraph pole and a metal beer barrel provide alternative perching, none of which is more than 3ft (approx. 1m) from the ground. There is therefore the maximum unimpeded flying space for the size of the aviary and the owls get some flapping exercise in reaching the ledge. A converted dustbin lid is set into the floor; faced with coarse concrete, it makes an ideal bathing point. Uneaten food, accumulated pellets and other debris are removed from the natural earth floor as necessary, and the top layer of soil is replaced with fresh leaf mould from the local woods.

On being released into the aviary, the Bengal Eagle Owl flew up to the ledge and the Snowy Owl perched on one of the sections of telegraph pole. Thereafter, the Snowy Owl was always to be found on one of the sections of telegraph pole or on the ground, but never up on the ledge. The Bengal Eagle Owl, by contrast, used the entire flying space and was altogether a more active and interesting aviary subject from the beginning. The aviary floor has been landscaped with a gradient from the back to the front and a variety of rocks and logs used to retain the soil. Ten assorted conifers, none of them more than 3ft (approx. 1m) high, and a small Hebe were planted in the aviary, which had been built around a small Elder and a Horse Chestnut *Aesculus hippocastaneum*. Eighteen months later, only the Hebe survives, all the other plants having succumbed to a lack of water and pruning by the owls. There is considerable shrub and tree cover on both sides and overhead, as the aviary is set into a shrubbery. The aviary faces onto an open lawn, and the owls appear to take an interest in passers-by - human and otherwise.

I had not thought any further ahead than housing and studying these two owls. However, the supposedly geriatric Snowy Owl turned out to be in breeding condition and from the second day of residence hooted around the clock. A series of telephone calls failed to locate a female, but Cricket St

Thomas Wildlife Park offered me a Bengal Eagle Owl. Other than that the species had bred at the park in the past, they were unable to provide any history of the bird, which I was pleased to have in exchange for some waterfowl. It is slightly smaller than my original bird. I collected it on May 4th and all three owls lived together amicably for a few weeks. Late in September, I started to hear owls hooting and a certain amount of clucking that accompanies nest-scraping on the part of the male. These owls have so far been less vocal than Vaughn's pair; his male seems to cluck and nest-scrape as a response to passing humans. The Snowy Owl, while not appearing to be harassed by the other owls, went into decline, and was returned to Vaughn, where he made a swift recovery and continues in rude health.

I was increasingly convinced that the other two were a true pair, and on October 24th 2004 one of them was sitting flat on the ledge, in what looked like an incubating posture. Not wanting to upset the birds in their first breeding attempt, I kept out of the aviary and it was not until November 29th that I was able to see, from outside the aviary, an egg under the wing of the sitting bird. The following day egg shell was visible on the ledge next to the bird which has proved to be the female. From then on, food consumption increased, and what started off as little "twittering sounds" coming from the nest, got louder every day. Still trying to keep disturbances to a minimum, it was not until January 7th 2005, that a baby owl was seen. My notes for January 22nd record that "one of two baby owls" was seen perched on the lip of the nesting ledge. The following day one of them was on the floor and feeding itself, even though it was only half-grown and was more fluff than anything else. When I went in to investigate, with a view to restoring the owlet to the safety of the ledge, the male hit me hard on the back, and I retreated hastily. This was the only time either of the pair has connected with me, although they will both "clop" their beaks and fluff out their feathers if I approach them as they sit on the ledge. They then usually get out of my way, except when on eggs or young. The errant owlet spent that night and the next on the floor, but was back on the ledge with its sibling on January 24th, leaving me wondering whether it flew there or, more likely, climbed up the wire.

I had been warned that this owl is often double-brooded, and on January 26th the female was again sat tight on the ledge, as if she had laid again. The two young birds were not seen off the nesting ledge again until January 29th, when late in the afternoon both were pottering around on the ground and one was again seen feeding independently. The smaller of the two young (which had one well developed ear tuft) spent all of the next day on the ground or on the perches with its father, while the other (which had no ear tufts) sat on the ledge next to its incubating mother. On February 4th, one was seen to fly effortlessly from the ground to one of the perching

posts. It was the first time either of them had been seen to fly. The next day one was seen to fly up to the ledge. At this stage, their tails were not full grown, they still had a lot of body fluff, and only one decent ear tuft between them.

With the first brood, it had been 39 days from first appearing to incubate, to eggshell being seen; Simmons (1976) gave an incubation period of 35 days. The first baby “twitterings” from what turned out to be the single young bird of the second brood were heard on March 3rd. On March 23rd, a flattened eggshell appeared on the aviary floor, and an attempt to see into the nest revealed one baby just visible under its mother, and one cracked egg.

My notes for March 26th record the two young of the first brood as looking just like their father (a paler bird than his mate), although less richly coloured and somewhat larger. The two were seen to preen each other’s faces and wings. On March 26th the latest owlet was about the size of a pigeon *Columba livia*, and sitting next to its mother for the first time, rather than underneath her. Four days later a broken eggshell was thrown out of the nest. It was all that remained of the damaged egg seen earlier. One of the youngsters was seen to eye a passing mouse in a speculative fashion, and to pounce on the hose used to refill the bath. On April 27th, the latest baby was on the floor, and sat on the beer barrel the following day. The day after that, it was playing like a kitten with a primary moulted by one of its parents. It did not regain the ledge until May 3rd. By May 17th, although still retaining a lot of fluff, it was seen flying as well as the others.

In early September I parted with one of the young owls to someone who wanted a female; I tried to select the biggest, but heard later that it had been DNA-sexed, which showed it was a male. On reflection, it may not have been the biggest bird. It is one thing to be able to tell five birds apart from outside the aviary, when they are all sitting calmly in a row, and quite another to pick out the required individual when armed with a net and when they are all flapping around one’s head in a fairly confined space. Less food was consumed for a week or so after the departure of the young bird, which I believe was one of the first two. However, food consumption soon went up again. There was also much hooting and scraping and by September 25th the adult pair had two eggs on the ledge, closely brooded as before by the female, with two grown young still in the aviary and no sign of aggression. Indeed, one of the young birds, I believe the March-hatched one, started to share incubation with her mother. This was the larger of the two remaining young, which it now seems fairly obvious are of opposite sexes.

Five eggs were eventually laid, presumably at least one of them by the young bird which was less than a year old. The two females incubated side by side for some four weeks, after which the young bird lost interest. One

eggs was always away from the nest after this. It was at the other end of the nesting ledge and was eventually removed and proved infertile. Soon afterwards, one of the four eggs was found broken on the aviary floor. On the morning of November 22nd, the adult female was off the nest and showing no interest in returning, so I removed the remaining three eggs, which had either stopped developing at an early stage or were infertile. I suspect the former, which would be expected when two birds share the same nest; usually in such cases the eggs get chilled in rotation (between the two incubating birds) and do not hatch. The eggs incidentally are chalky white when fresh, about the size of a chicken egg, but rather more rounded in shape. Until I can find suitable homes for the two young, it seems unlikely that their parents will produce any more.

When not feeding young, my owls seem satisfied with four day-old chicks each per day. They are given a rat each about once a month, which provides them with a rather more challenging meal. The day-old chicks are swallowed whole, whereas the rats have to be ripped apart; they always leave the tail and rear end. I must emphasise that these are domestic rats and that wild rats are never given to them. I have, however, given them mice caught in the garden, when no poison has been laid. These appear to be relished. Larger food items, e.g. pheasant, rabbit, pigeon and half-grown chickens, need to be cut into sections and so long as they are prepared in this way, are all taken. An adult rabbit, killed on the road, which was presented whole, was ignored as apparently it was not recognised as food.

Yealland (1971) referred to pellets in nests in the wild containing mammal remains only, while Page (1920) related a secondhand story of one shot while in possession of a large frog. It is likely that they will eat whatever they can catch. Given that most birds will take cuttlefish bone, I gave one to the owls, who played with it and chewed bits off until it was gone, so they now always have one available. Oystershell grit is also provided, but I have never seen it taken.

While I would not want to discount Simmons' observation of dust-bathing, it is possible that nest-scraping was mistaken for dust-bathing. My owls have not been seen to dust-bathe, although the dry soil under the nesting ledge would be ideal for this. They bathe in water almost daily and in fact are never seem to drink without also bathing. Simmons referred to play behaviour. I have had damage to 2in (approx. 5cm) chicken wire that recalls what a parrot might do. One night recently a large hole was chewed in the roof netting, and hasty repairs were made with more suitable netting, while four pairs of eyes innocently watched me. They will also pull up, dig up, and otherwise damage vegetation. A most attractive flowering Clematis growing up the front of the aviary lost half of its growth through an owl biting through one of its two stems near the ground.

The owls have become used to our dog and ignore her unless she approaches too closely, when they will fluff out their feathers and “clop” their beaks in defence. When they have young in the nest, the male flies at the wire to drive the dog away. Strange dogs attract proportionally more aggression. As for cats, we have hardly ever seen one since the owls arrived.

The original pair at Linton Zoo nested on the ground; I have been told that owls do this only if a more tempting elevated site is not available. I also note from the same article that two of the first brood reared young when less than a year old when paired to unrelated stock.

While not wanting to make sweeping statements based on less than two years' experience, these owls appear to have many virtues as aviary subjects, being handsome, always on view, not unduly noisy, hardy in our climate, and free breeders. What more could one ask?

References

- Page, W. T. 1920. The Bengal Eagle-Owl. *Bird Notes* Vol.III, Series III:40-41.
Parry-Jones, J. 1998. *Understanding Owls*. David & Charles, Newton Abbot & London.
Sayers, B. 1981. Notes on Captive Owls. *Avicultural Magazine* 87,4:248-255.
Simmons, K. 1976. Breeding the Bengal Eagle Owl. *Avicultural Magazine* 82,3:136-138.
Yealland, J. 1971. A Visit to North-Western India. *Avicultural Magazine* 77,4:136-145.

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PHILIPPINE EAGLE OWL HATCHED

In *International Zoo News* Vol.52, No.8, pp.481-482 (2005), it was reported that at the Negros Forests and Ecological Foundation's Biodiversity Conservation Centre (NFEFI-BCC), one of two pairs of Philippine Eagle Owls *Bubo philippensis*, had succeeded at the third attempt in hatching a chick. On each of the first two attempts, earlier in the year, the female incubated a single egg but abandoned it after a month. On October 13th a further egg was discovered in the nest, then on November 20th when the female left the nest to take a bath, the keeper observed a chick in the nest. It was thought to be no more than three days old and that the incubation period had been about 39 days. If it was reared successfully, it seems that it will have been the first time this species has been bred in captivity.

BOOK REVIEWS

INTERNATIONAL ZOO YEARBOOK

Launched in 1960 by The Zoological Society of London, the *International Zoo Yearbook* is an international forum for the exchange of information amongst zoos. It is also a source of information for others interested in the goings-on in the zoo world and some of the information can be relevant to private aviculturists (as well as those working in public collections).

The latest *Yearbook*, Volume 39, opens with a Guest Essay entitled The future of zoos and aquarium: conservation and care. The *Yearbook* is then divided into three sections. Section I, entitled Zoo Animal Nutrition, contains 11 articles describing various aspects of nutrition for zoo animals. Most relevant to members are likely to be the analysis of the maintenance diet offered to lorries and lorikeets at Loro Parque Fundación and the quantitative review of the diet of the Purple-bellied Parrot *Triclarina malachitacea* at Loro Parque Fundación. The final article in Section 1 is about the need to standardize nutritional information within captive management or husbandry manuals. The format recommended by NAG (Nutritional Advisory Group of the AZA (American Zoo and Aquarium Association)) is given as a model for husbandry guidelines. I was particularly interested to see reference to *Husbandry guidelines for the Bali mynah (Leucopsar rothschildi) species survival plan* published by the AZA, and to learn that this manual is continually reviewed, with updated material available online via the *Bali mynah husbandry manual* on the AZA Avian Scientific Advisory Group website: www.riverbanks.org/subsite/aig/baliopen.htm

In Section 2, The Developing Zoo World, there are two articles likely to be of particular interest to members, the first is about breeding and hand-rearing the Kori Bustard *Ardeotis kori* at the Smithsonian's National Zoological Park, Washington, DC and the second describes what is called the daily activity budget of captive and released Scarlet Macaws *Ara macao* at Playa San Josecito Release Site, Costa Rica. The authors observed the activity of mostly captive-bred and hand-reared macaws that were being prepared for release and collected data after their release to use as the first steps towards developing a protocol for assessing the release potential of individual birds.

Section 3, the Reference Section, contains a list of Zoos and Aquariums of the World (updated to 2004), a list of national and regional associations and a list of international studbooks with data from 2001 and 2002. These three documents are also on the searchable CD-ROM enclosed with the *Yearbook*.

The International Zoo Yearbook Volume 39, Managing Editor Fiona A.

Fisken, Editorial Assistant Joy Miller, contains 395 pages of text, diagrams and photographs. It is priced £71.00 (€116.00 or US\$145.00) plus p&p. The list of Zoos and Aquariums of the World is available as an offprint/ with the CD-ROM, price £20.00 (€32.00 or US\$38.00) plus p&p. A number of earlier volumes remain available. Enquiries should be addressed to The Zoological Society of London, Dept. IZY, Regent's Park, London NW1 4RY, UK. Fax: +44 (0)20 7449 6411/website:www.zsl.org/info/publications/e-mail:yearbook@zsl.org

Malcolm Ellis

CARDINALS, GROSBEAKS, BUNTINGS AND SISKINS

International travel provides an opportunity for many hours of uninterrupted reading. Whenever I travel I usually select two books, one for the outbound trip and the other for the homebound journey. During a recent trip to Italy though I took just one book - *Breeding American Songbirds* by Rob van der Hulst, published last year in the Netherlands. I took the English language version of this 319 page book, which has also been published in a number of other languages.

The book is broken down into two parts. The first part covers husbandry and discusses housing, breeding and feeding. The second part covers the American songbirds - cardinals, grosbeaks, buntings and siskins - upon which the book concentrates. Each species is meticulously described. Van der Hulst gives the name of each bird in English, French, Dutch and German, he gives the etymology of the scientific name, describes the bird's habitat and there is a colour map that identifies the bird's range, showing the areas that may be used for wintering and its summer or breeding grounds. The book is richly illustrated - even the maps are in full colour - there are no black and white illustrations. Included are photos of nestlings, juveniles and adults.

The text is a gem for aviculturists who keep these birds. I also recommend it to keepers of other such songbirds from elsewhere in the world. The detail and information is extensive; few modern books written by aviculturists principally for the avicultural market are so encompassing. Unfortunately the North American species are virtually unknown in aviculture here in North America where, with few exceptions, it is illegal to keep native birds. This means that most North American aviculturists will not bother to obtain a copy of this book. My recommendation is that if you are serious about bird keeping, you should get a copy of this book, irrespective of whether or not you have access to the species described. The information on aviaries, for example, can also be relevant to breeders of finches and other groups of birds.

The author, Rob van der Hulst, has more than 25 years' experience of breeding American songbirds. His achievements include being the first in the Netherlands to breed the Rose-breasted Grosbeak and the Blue Grosbeak. His extensive experience gives him a special insight and allows him to write about this group of birds which alas is, for the reason described above, rather neglected in North American aviculture. Only the Red Siskin is reared with any regularity in the USA and Canada.

Breeding American Songbirds by Rob van der Hulst, 319 pages, illustrated throughout in full colour, is published by Drukkerij Het Centrum, Utrecht, the Netherlands.

Derian A. L. Silva Moraton

* * *

NEW HUSBANDRY GUIDELINES FOR FLAMINGOS

After several years of international collaboration, a new set of guidelines for the successful maintenance of flamingos in captivity has been published by the American Zoo and Aquarium Association (AZA) and the European Association of Zoos and Aquaria (EAZA), in cooperation with the Wildfowl & Wetlands Trust (WWT).

The new guidelines represent recommendations of husbandry techniques given the scientific data currently available and the successful experiences of their members. Guidelines for the renovation of existing facilities and the construction of new exhibits is included. The extensive bibliography contains over 2,600 references of scientific and other articles regarding flamingos.

The Editors, Christopher Brown, AZA Ciconiiformes TAG, Dallas Zoo and Cathy King, EAZA Ciconiiformes/Phoenicopteriformes EEP, Rotterdam Zoo say the "while much data has been compiled for these guidelines, there is still much to be learned about the husbandry of flamingos. It is our intention that these guidelines be the catalyst for scientific inquiry into the management of flamingos in captivity."

Those wishing to know more about these husbandry guidelines should contact Dr Christopher Brown, Curator of Birds, Dallas Zoo, Texas, USA (E-mail: CDBROWN@mail.ci.dallas.tx.us).

NEWS AND VIEWS

INTERNATIONAL PARROT CONVENTION

The VI International Parrot Convention will be held from September 27th-September 30th 2006 at Puerto de la Cruz, Tenerife. To learn more you can visit the website: www.loroparque-fundacion.org or e-mail: dir.general@loroparque-fundacion.org

* * *

BRED IN THE UK FOR THE FIRST TIME

It was reported in *Cage & Aviary Birds*, November 10th 2005, p.5, that Scheepmaker's Crowned Pigeon *Goura scheepmakeri* has been bred at the Cotswold Wildlife Park, near Burford, Oxfordshire, and that this is the first breeding of this species in the UK. The pair consists of two captive-bred birds that arrived in November 2004 from Cologne Zoo, Germany. Scheepmaker, after whom this species is named, was a Dutch civil servant and collector in New Guinea who was active around 1875.

* * *

NEWS FROM TWO COLLECTIONS IN TEXAS

Two Ivory-billed Aracaris *Pteroglossus flavirostris* have been hand-reared by Josef Lindholm at the Dallas World Aquarium. They are the first hatched outside of South America. The arrival of eight Groove-billed Toucanets *Aulacorhynchus sulcatus* has brought the number of ramphastids in the collection up to 24 taxa. A Guianan Cock-of-the-Rock *Rupicola rupicola* built a nest and spent a great deal of time on it, but has yet to lay any eggs. Andean Cock-of-the-Rocks *R. peruviana* laid eggs, but failed to build a nest.

The 17th chick has been hatched and reared by a pair of King Vultures *Sarcoramphus papa* at Cameron Park Zoo, Waco. Like the previous 16 (the first in 1983 is now living in Mickey Ollsen's Wildlife World Zoo), its parents are Vivian (aged at least five years old when she arrived on January 5th 1967 from Bill Chase in Miami) and Vernon (received on loan August 13th 1982 from Baton Rouge Zoo). It was the first egg hatched by the pair since being moved to a new exhibit in 2000. The pair share the exhibit with Collie's Magpie Jays *Calocitta colliei*, Inca Terns *Larosterna inca*, Scarlet Ibis *Eudocimus ruber*, White-faced Whistling Ducks *Dendrocygna viduata*, Sun Conures *Aratinga solstitialis*, Blue-headed Conures *A. acuticaudata* and Patagonian Conures *Cyanoliseus patagonus*, plus various Central and South American mammals.

BEST BREEDING SEASON EVER

During the winter of 2004-2005, Paradise Park Wildlife Sanctuary lost two of its older Red-billed Choughs *Pyrrhocorax pyrrhocorax*, leaving just three breeding pairs. Unfortunately, this also meant that the birds of two long-term pairs lost their respective mates, so had to be paired with new partners. One pair was housed at the coastal aviary at Zennor - where three chicks had been produced in 2004, and this upset resulted in no chicks being hatched there this year.

However, the 'wild food' strategy developed at this aviary by Paul Carter (see *Avicultural Magazine* Vol.110, No.3, p.107 (2004)) led to the best breeding season ever in the aviaries at the park. At one point six chicks were being reared on the various bugs collected by park staff and those brought in by members of the public. After a week though it was noticed that one pair was not feeding its young as often as the other pair, and indeed eventually this pair abandoned its young. The reason for this may have been that they were a new pairing and lacked the appropriate parental skills - it sometimes takes two or three breeding seasons for Red-billed Choughs to acquire these skills.



A chatter of Choughs at Paradise Park Wildlife Sanctuary.

The youngest chick was too weak to be saved, but the second chick, which was two days older, was taken to be hand-reared. This meant that for four weeks Ray Hales had the unenviable task of putting in the same hours as a wild chough parent - starting feeding the chick at 5.00am and not finishing until 8.00pm. Under Ray's care the young bird developed rapidly. Within a couple of weeks it was killing insects for itself and was taken on regular trips into the garden where it would probe under small stones and leaves in search of food. It also developed an ear-piecing call.

The other pair continued to raise its four young and eventually all appeared on the ledge outside the nest. Three weeks after they had fledged

it was decided to move the whole family into one of the large flight aviaries, so that the youngsters could develop their wing muscles. The hand-reared bird was gradually introduced into a second aviary, along with three females from 2004 and a female from 2003.

The park at Hayle, Cornwall, now has two large aviaries for choughs. Each has a range of microhabitats designed to encourage the birds to probe and search for food as they would in the wild. With five Red-billed Chough in one aviary and 10 in the other, Ray, the staff and visitors have come to appreciate that a - chatter - the collective noun for choughs, is very apt indeed.

* * *

EXHIBITED FOR THE FIRST TIME AT COLOGNE ZOO

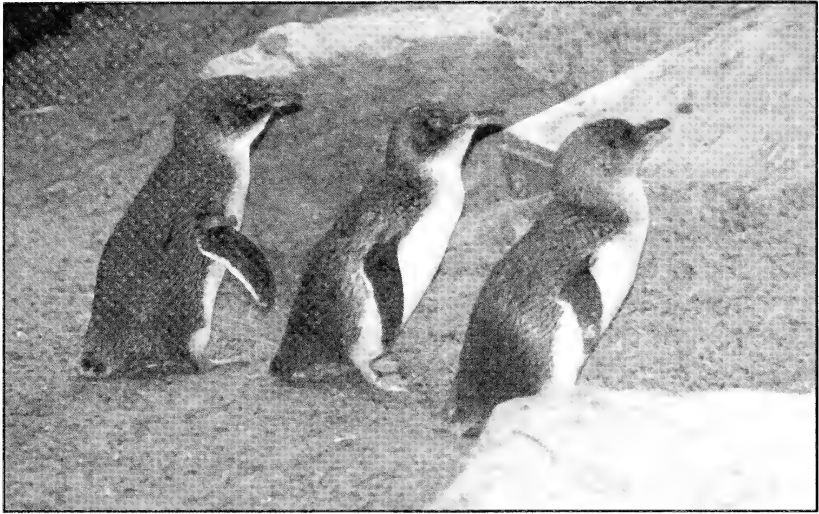
In *Aktuelles Aus Der Vogelwelt* Vol.19, No.5, p.148 (May 2005), Dr Herbert Schifter explained that having written in the March issue about the Fairy or Little Penguins *Eudyptula minor novaehollandiae* of Granite Island (an offshore island in Encounter Bay, South Australia, on which some 2,000



Copyright Christopher Brack

Head Keeper Marcel Boulez, with Fairy Penguins at Antwerp Zoo, September 1986.

penguins live and breed) and stated that this the smallest representative of the penguin family was rarely exhibited outside Australia, the Annual Report for 2004 from Cologne Zoo, Germany, had been published and included the



Theresla Schifter

Fairy Penguins at Melbourne Zoo

news that this zoo on the Rhine had received for the first time nine Fairy Penguins that had all been bred in the colony at Melbourne Zoo. Dr Schifter had seen the colony during a visit to Australia in November 2004.

At Cologne Zoo they are exhibited in the former King Penguin enclosure. This enclosure, which is air-conditioned, had been vacant for many years because it is no longer considered large enough for other than this small species.

Dr Schifter's note in *Aktuelles Aus Der Vogelwelt* was translated from German to English by Christopher Brack, who remembers seeing Fairy Penguins for the first time in Antwerp Zoo back in the 1980s, when he took the photo on p. 186.

To the above, Dr Schifter has added that this penguin was received twice by London Zoo in the 19th century. He quoted the *Report of the Council of the Zoological Society for the Year 1897*, pp.39-40, published in 1898, which on the subject of notable additions to the menagerie in 1897, noted: "Two Blue Penguins (*Eudyptula minor*), from New Zealand, purchased May 21st. Only one example of this elegant little penguin had been previously received by the Society." Unfortunately, Dr Schifter has not yet been able to find out which year the first example was received. Dr Schifter added that during the 20th century this penguin was kept in Brookfield Zoo, Chicago and in Berlin Zoo in 1963.

SAVING GURNEY'S PITTA

BirdLife International is appealing for help to save the lowland forest habitat of the beautiful and enigmatic Gurney's Pitta *Pitta gurneyi*, one of Asia's most endangered birds. Gurney's Pitta lives in lowland forest in Myanmar (Burma) and neighbouring Thailand. This forest is being cleared to make way for subsistence farming and for large scale palm oil and rubber plantations. In addition, BirdLife International alleges that Gurney's Pitta is "still being captured for the caged-bird trade." Is this really so - do any members know of Gurney's Pittas being offered for sale or being kept in aviaries in Europe or North America - or is it just a localised trade?

A few years ago, with only an estimated nine pairs left in Thailand, it was thought that Gurney's Pitta was heading for extinction. Then in 2003, an amazing discovery was made in the lowland forests of Myanmar - a thriving population of Gurney's Pittas that was subsequently estimated to number several hundred pairs.

Most of the rediscovered pittas are living in forest just beyond the boundaries of the proposed Lenya National Park. So, BirdLife International and BANCA (the Biodiversity and Nature Conservation Association of Myanmar) are working with the Ministry of Forestry and the Government of Myanmar to have the boundaries of the proposed national park extended to include the forest in which the pittas are living. Within the boundaries of the national park they will enjoy a higher level of protection (as will other wildlife in the forest) and it will capitalise on a wonderful conservation opportunity.

Let us hope that most if not all of the pitta's forest habitat can be included within the national park. Another hopeful sign is that Gurney's Pitta seems to favour secondary regenerating forest, so BirdLife International hope that once the core population has been stabilised within the protected areas, the pittas will be able to spread and occupy land that has been replanted with native lowland forest trees.

If you would like to support the work to save Gurney's Pitta, you can send a donation to BirdLife International, at World Bird Club Appeal, BirdLife International, Wellbrook Court, Girton Road, Cambridge CB3 0NA, UK.

* * *

BIRD OF PARADISE BRED AT TOLEDO

Following a 17-day incubation period, a Lesser Bird of Paradise *Paradisaea minor* was hatched at Toledo Zoo, Ohio. The female built the nest and incubated the egg normally, but the chick was hand-reared. It is the first Lesser Bird of Paradise to be bred at this zoo, which is only the third US zoo to breed this species. Currently there are 21 Lesser Birds of Paradise in five institutions in the USA.

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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: P. Boulden, Hon. Secretary/Treasurer, Avicultural Society, Arcadia, The Mounts, East Allington, Totnes, Devon TQ9 7JQ, UK or E-mail:admin@avisoc.co.uk

FRANK MEADEN

Frank Meaden died on December 9th 2005. In the 1960s, Frank and the late Dr Colin Harrison founded the ASPEBA (Association for the Study and Propagation of European Birds in Aviaries), which continued to meet until as recently as 2003. Frank's book, *A Manual of European Bird Keeping* (Blandford, 1979), later re-named *Keeping British Birds*, was reprinted recently by Hampshire Breeders and Books. He also wrote many articles, a number of which were published in the *Avicultural Magazine*. Frank Meaden was credited with the first breeding in the UK of many British/European birds, as well as others including the Long-tailed Rosefinch *Uragus sibiricus* and the Three-banded species *Carpodacus trifasciatus*.

KEN SEMPLE

Ken Semple also died in December 2005. Ken, who with his wife, Ivy, attended the social meeting at Paignton Zoo Environmental Park in September, had, over the years, kept many different kinds of birds, including native British birds and hybrids, Zebra Finches and other Australian finches, Bengalese, parrots and various softbills. He was credited with the first breeding in the UK of the Spotless Starling *Sturnus unicolor*. His account of this breeding was published in the *Avicultural Magazine* Vol.77,5:166-167 (1971).

* * *

SOCIAL EVENTS 2006

Members and their guests have been invited to visit the Chairman Christopher Marler's collection at Weston Underwood, Olney, Bucks. The visit will be on Saturday, May 13th 2006, when the AGM will also be held. The President's Garden Party will take place on Saturday, July 15th. The society hopes to visit Whipsnade Wild Animal Park on September 9th, 16th or 23rd.



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