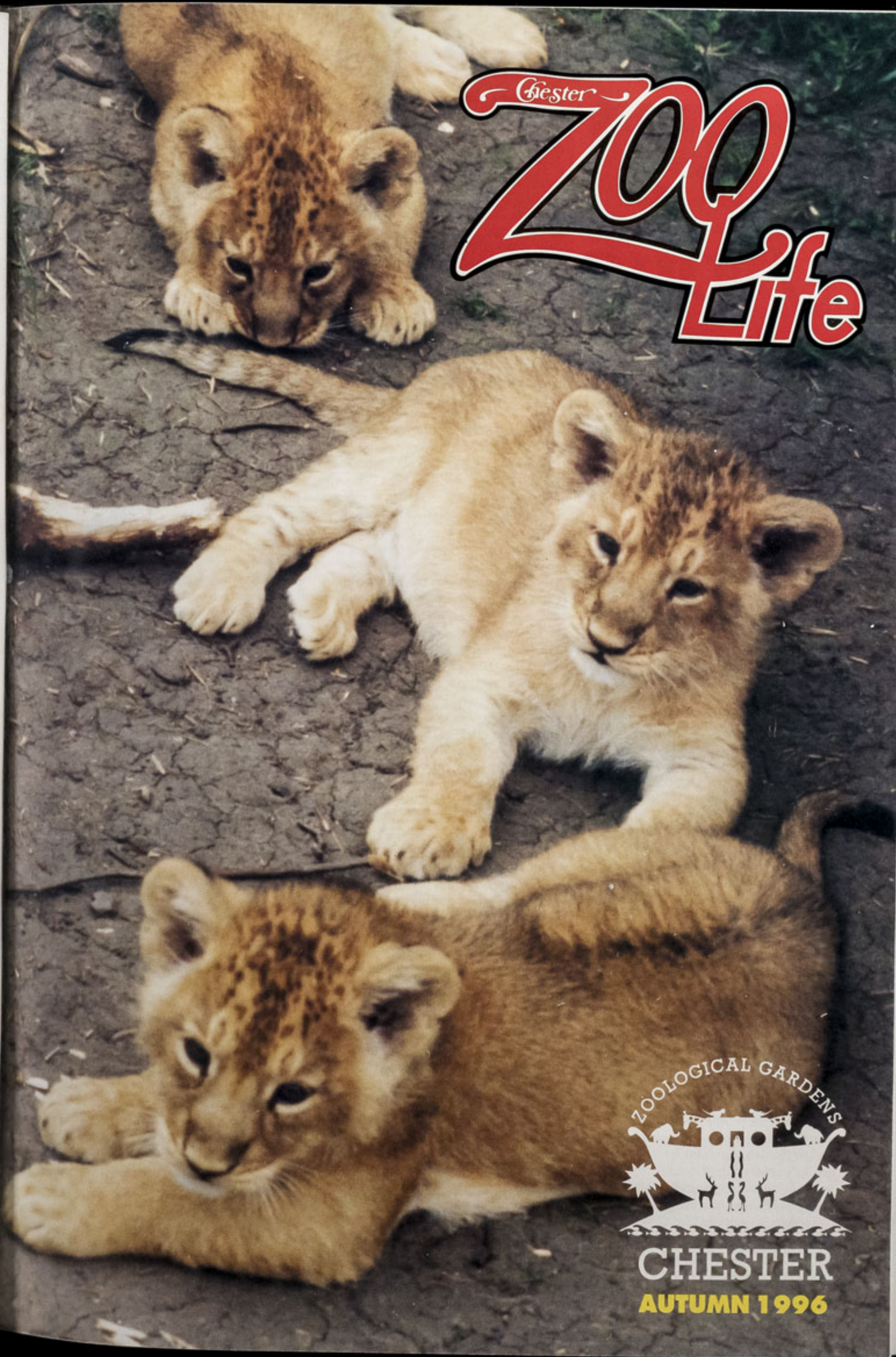



LIFE

# Chester **Zoo** **Life**



ZOOLOGICAL GARDENS  
  
**CHESTER**  
**AUTUMN 1996**

# Chez Nous



Chester Zoo Life is published by the North of England Zoological Society, Upton-by-Chester, Cheshire CH2 1LH Telephone (01244) 380280  
 Director: Dr Gordon McGregor Reid  
 Editor: Pat Cade

## ANIMAL REINTRODUCTIONS

I was delighted to read in *Zoo Federation News* a citation in honour of Dr Michael Brambell, my highly regarded predecessor as Director of Chester Zoo. This was prepared by Professor Roger Wheeler, Director of Edinburgh Zoo and Chairman of the Zoo Federation.

Roger read out the citation at the recent Annual General Meeting of the Federation, in connection with an *Award for Outstanding Achievement* – recognising Michael Brambell's exceptional lifetime contributions in service to the zoo community. On behalf of Chester Zoo, I would like to add our heartiest congratulations on this much deserved honour!

Roger Wheeler recalls that Michael and Patricia Brambell once hand-reared a chimpanzee named Cameron who was, via Stella Brewer, one of the very early zoo animals to be returned to the wild in the forests of Niokolo Koba, Senegal. Many good zoos aspire to reintroductions but real, lasting success in this area remains elusive. There are some much publicised recent examples, such as John Aspinall's bold and promising endeavours to reintroduce gorillas from the gorilla orphanage in Brazzaville in a protected area of forest in the Lefini Reserve, 150 miles north of Congo Brazzaville. So far, six from nine survive and they are evidently thriving in their new (or should I say old?) home.

### SUCCESS

Certainly the prospect of successful reintroductions of primates is designed to stir the imagination and emotions. The Federation has, for example, supported the reintroduction of the beautiful Golden Lion Tamarin and there are now about 125 of these – which make up a whacking 20% of the total wild population – living in the Atlantic coastal forest of Brazil. Nevertheless, for every success story there seems to be a dispiriting failure. Reintroduction is a complex subject which

can involve a number of different approaches to conservation in the field. Increasingly, the attention of zoologists is being drawn to the doubtful cost effectiveness of particular programmes and, in some cases, to the risks of transferring diseases. Zoos have been involved in reintroduction programmes (such as the classical one for North American Bison) for more than half a century. But it was not until 1988 that the World Conservation Union (or IUCN) formed the Reintroduction Specialist Group. This serves to collate information, draw together expertise, address key issues and establish standards and guidelines.

### PARTNERSHIP

Chester Zoo presently holds more than 30 species which are, or have been, the subject of reintroduction projects. These are often organised within the zoo community in collaboration with wildlife agencies in the habitat countries. This is not to suggest that Chester has always taken the lead in this. Thus far, our main strength has been in *breeding* endangered species. However, in some cases we have had a substantial involvement: as with Père David's Deer successfully returned to China and Partula Snail recently sent back to the Pacific Islands. For this latter work, in close partnership with London Zoo and others, we received a 1995 Federation Award.

### NATIVE SPECIES

Zoo reintroductions are not necessarily confined to exotic animals. It is our proud boast that – since becoming extinct locally – the Barn Owls now often seen in Cheshire, Staffordshire and Merseyside are likely to have been bred in Chester Zoo or to be the offspring of released birds. Our own Curator of Birds, Dr Roger Wilkinson, has been engaged for some years in Barn Owl reintroductions with Dr Carol Hackney of Keele University. He is currently supervising a research student evaluating the success of this important project.

More and more, Chester Zoo is working with English Nature (the government's conservation agency) to support various official 'Species Survival Plans' for native animals and the associated reintroduction programmes. For example, Curator of Mammals Nick Ellerton, together with our own Penny Rudd, recently hosted a meeting at the Zoo for English Nature and the Cheshire Wildlife Trust on planned local reintroductions of the Dormouse, surely one of Britain's most endearing and charismatic species. Our Herpetologist, Keith Brown is actively supporting the Species Survival Plan for the northern race of Sand Lizard, which is critically endangered in the sand dunes of Ainsdale near Southport. The good news is that there are two gravid females in our newly opened Sand Lizard breeding enclosure. This creates the intriguing possibility of sending lizards back to the dunes in the not too distant future, once advised by English Nature. (see page 15)

### SEAHORSES

Our Aquarists, Mike Crumpler and Justin Bell, are successfully breeding the Tadpole Shrimp which is Britain's rarest crustacean.

This is with a view to creating an 'insurance population' for reintroduction should this prove to be necessary. We are also producing Seahorses by the hundreds to support the work of the Seahorse Conservation Group, newly established by Chester and London zoos in collaboration with the amazing Dr Amanda Vincent. Perhaps you saw the recent QED programme on BBC television about Amanda's impressive work with local people in the Philippines to save Seahorses? Countless millions of Seahorses are being caught every year in an attempt to satisfy the insatiable demands of the trade in traditional oriental folk remedies. Some people believe that eating dried, powdered, Seahorses will greatly enhance your love life.

### FIELD PROJECTS

Chester Zoo has also become involved in field projects to study general issues in ensuring the survival of reintroduced zoo animals, such as post-release provisioning of food and pre-release training. Research Associate Steve Hogarth has just returned from Gashaka Gumti National Park in Nigeria, where he has been surveying the population stocks of Chimpanzees with a view to studying their behaviour in the wild and comparing it with that of zoo bred animals. You can read Steve's account of his trip on page 8. Similarly, Research Associate Adam Britt has recently returned from Madagascar where he has been documenting the survival skills of wild lemurs in relation to our zoo bred population.

The Zoo's spacious, well-established island exhibits are proving to be invaluable in assessing the skills and possible training needs of primates. The extensive new Monkey Islands complex now under construction will – as well as improving animal welfare and public appearance – greatly increase the opportunities for worthwhile studies related to reintroductions. So hopefully members will understand if that part of the Zoo looks a wee bit like a building site for the next few months!

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## THANK YOU!

At the time of writing, the visitor numbers for this year were about 90,000 ahead of the same time last year. We recognise that a lot of this success is due to Karha, our wonderful elephant calf. But I want to express my thanks to the staff, volunteers, students and trainees for their hard work in making a zoo visit an experience that makes people want to return. Our market research shows that an amazing 87% of our visitors have been before. That's a statistic that many other tourist attractions would love to have. So a very big thank you to everybody!

◆ Front Cover: The three Asiatic lion cubs, born in May to Chandani.

## MEMBERS' MEETINGS 1996\97

Saturday 5 October '96  
2.30 pm in the lecture ball

Derek Lyon - 'VETERINARY ASPECTS OF KARHA'S FIRST SIX MONTHS'

Saturday 9 November '96  
2.30 pm in the lecture ball

John Gittins - 'HISTORY OF HILBRE BIRD OBSERVATORY'

Saturday 14 December '96  
2.30pm in the lecture ball

Professor Ian Munro of Daresbury Laboratory - 'THE HONEY BEE: MYSTERY, MAGIC OR SCIENCE'

Also on 14 December

- Members' Christmas lunch,  
12 noon in Oakfield Restaurant .  
£12.95 adults, £7.50 children (3-11 years).

Please ring Maureen (01244 650203)  
to reserve your place.

Saturday 11 January, '97  
2.30 pm in the lecture ball

Dr Roger Wilkinson -  
'ZOO BREEDING PROGRAMMES FOR ENDANGERED BIRDS.'

Saturday 8 February '97

Dr Tony Martin - 'THE BIOLOGY AND CONSERVATION OF WHALES.'

Saturday 8 March '97

2.30 pm in the lecture ball  
Andy Chesters - 'ENDANGERED SPECIES LINKED TO HM CUSTOMS WORK'

Saturday 12 April '97

2.30 in the lecture ball  
Dr Gordon McGregor Reid -  
'ZOO REVIEW AND ZOO STAFF.'

May '97

ANNUAL GENERAL MEETING.  
Date to be confirmed.

To offset some of the expenses involved, there will be a fee of £1.00 at the door. Tea and biscuits are included

## DIRECT DEBITS

We plan soon to offer members the option of paying subscriptions by Direct Debit. Once details have been finalised, all existing members will receive information with their renewal notices, and forms will be included to complete and return to the membership office.

Payment by Direct Debit will cut the zoo's administration costs enormously, and we hope that many of you - particularly members who now pay by standing orders - will change to this method. As an incentive, there will be a small free gift to anyone making the change. For the first couple of months or so, this will be a copy of 'Karha's Story' - the children's book all about our baby elephant.

## CHESTER ZOO

### - ONE HUNDRED CLUB -

A few statistics!

\* Of the 142 founder '100 Club' members, who were in the very first draw in May '93, only 17 have since left the club.

\* Of the 125 who have stayed in for the three years and two months since, 82 have been winners.

\* To date the total paid into the club has been £31,225, of which half - £15,612.50 - is available for prizes. £15,100 has been paid out so far, in 157 prizes, with the remaining £512.50 being stored up ready for the next 'big' draw in December. The winners for the past three months are:

May '96:	£100	Miss M. Hurlston
	£ 50	Mrs M. Garbutt
	£ 50	Miss M Milan
	£ 50	Miss S. Garbutt
	£ 50	Mr. K. Roberts
June '96:	£1,000	Mr J. Gatlow
		(The Summer 'big draw')
	£100	Miss J. Goodall
	£ 50	Mr N. Stockdale
	£ 50	Mrs B. Jones
Mar '96:	£100	Miss K. Nolan
	£ 50	Mr G. Hilton
	£ 50	Mrs S. Jones
	£ 50	Ms C. Reynolds
July '96:	£100	Mr J Barnett
	£100	Mrs B. Irvine
	£ 50	Mr J Rafe
	£ 50	Ms A. Grey
	£ 50	Mr. A. Chiverton

Membership of the '100 Club' is still invited. The more members we have, the bigger the prize pot! Please contact Alan Sykes on ext. 278 if you would like to join in.

## ADOPTER DAYS

As a special 'Thank You' for their support, all our adopters are invited to one of our annual 'Adopters' Days.' This is your opportunity to come and enjoy a day out at the zoo and to chat to the keepers about the animals in their care.

The dates are Sunday 20 October and Saturday 26 October.

Your warm invitation is enclosed with this magazine.

## ELEPHANT WORKSHOP

Chester Zoo will be hosting the 1996 UK Elephant Keepers' Workshop. The date is Friday 27 September, and is open to anyone with an interest in elephant management or topical conservation issues.

For more information and a registration form please write or fax :  
Neil Spooner,  
UK Elephant Workshop Co-ordinator,  
North of England Zoological Society  
Upton-by-Chester, CH2 1LH.  
Telephone: 01244 380280 ext. 257 or 223  
Fax : 01244 381352.

**PRE-BOOKING  
IS ESSENTIAL**

## Prize Draw

Elephants, Vultures and Margays - what have they in common ?

Each of these endangered species has been helped through support for studentships from the Society's annual Prize Draw. Each year we receive many requests for help - and review every application most carefully. Sometimes even modest sums can make the vital difference between a student being able to complete an important piece of research in the field. That's where you come in - your generosity in 1995 helped with studentships to study seed dispersal by elephants in Ghana, Vulture foraging ecology in South America and Margay behaviour and breeding in South America.

*If every member and adopter sold just ten tickets, we would have a scholarship fund approaching £90,000 annually. This would be a wonderful help to the next generation of zoologists and veterinarians and a tremendous testimonial to the far sightedness of our members.*

**PLEASE HELP.**

**THERE ARE GREAT PRIZES,  
AND WE KEEP ADMINISTRATIVE COSTS  
TO THE BARE MINIMUM SO AS  
TO MAXIMIZE THE FUNDS.**

## RETIREMENT

Joan Butler, who joined the Education team in September 1992 as the Primary Specialist, retired at the end of July.

Good wishes for a long and happy retirement, Joan, from all the zoo staff and volunteers.

## ZOO LIBRARY

A reminder from Zoo Librarian Lynn Wilkinson, that the library is available for reference use by members and adopters. She believes that because of its almost secret location, many people don't even know of its existence!

The library is just to the right of the Oakfield House terrace, by the otter pool. It is open every weekday lunch time, between 12 noon and 2 pm. Lynn can sometimes open at other times by appointment – please ring her between 12–2 pm to discuss this. She can be reached on extension 283. The library is well stocked and Lynn can normally find the answers to most of your zoological questions!

## CONSERVATION AWARD

Chester Zoo was successful in winning a meritorious award from the Federation of Zoos at the AGM earlier this year. The award was for "A Successful Conservation Project for Fieldwork on Partulidae Tree Snails in French Polynesia."

## THEME EVENINGS

There are still a few places available on the Autumn theme evenings in the Oakfield Restaurant.

20 September – Irish Evening – £14.95.

25 October – Medieval Banquet – £17.50

15 November – Portuguese Evening – £14.95

Phone Jane or Sue on Ext. 209 for menu details and table bookings.



## ZOO REVIEW

### PENGUIN PARADE!



There's been a proliferation of penguins at the zoo this year. No less than 29 chicks have been successfully hatched and reared!

When first hatched, the chicks were taken into the incubation area at the zoo to keep them at a regulated temperature and ensure the best possible start. When they were ready to leave the incubator, they took up residence in the nursery pool, by the main penguin pool, where they will stay until their grey fluffiness has gone and their waterproof feathers have come through.

### FOOD-BALL FANATICS!

The elephants have discovered that a bit of heavy footwork can produce a tasty reward!

Students on the Technical Training Enterprise course at West Cheshire College have designed and made a huge, steel feeder ball for the zoo's elephants.

The ball is hollow, with one small hole into which the keepers put food. As the elephants roll the ball around with their feet, they can retrieve tasty titbits.

The ball was designed, after consultation with the keeping staff, by second year students on a modern apprenticeship scheme with TTE (Technical Training Enterprise). Well done!

## WANTED

A request to all computer users! Please don't throw away your used ink jet and laser printer cartridges. Zoo members Deborah and David Wall are currently recycling these items to raise money for new Elephant House facilities. Each cartridge can be worth up to £6 – and many are just thrown away. All makes are wanted, large or small, in any quantity.

Used postage stamps – including British ones – can also be recycled to raise funds. If you have any queries or wish to arrange collection, please contact Deborah or David on 01270 628289 or at 85 Birchin Lane, Nantwich, Cheshire CW5 6JZ

There is a collecting box in the elephant house and used cartridges and stamps can be left there.

## INTERNATIONAL STUDENTS

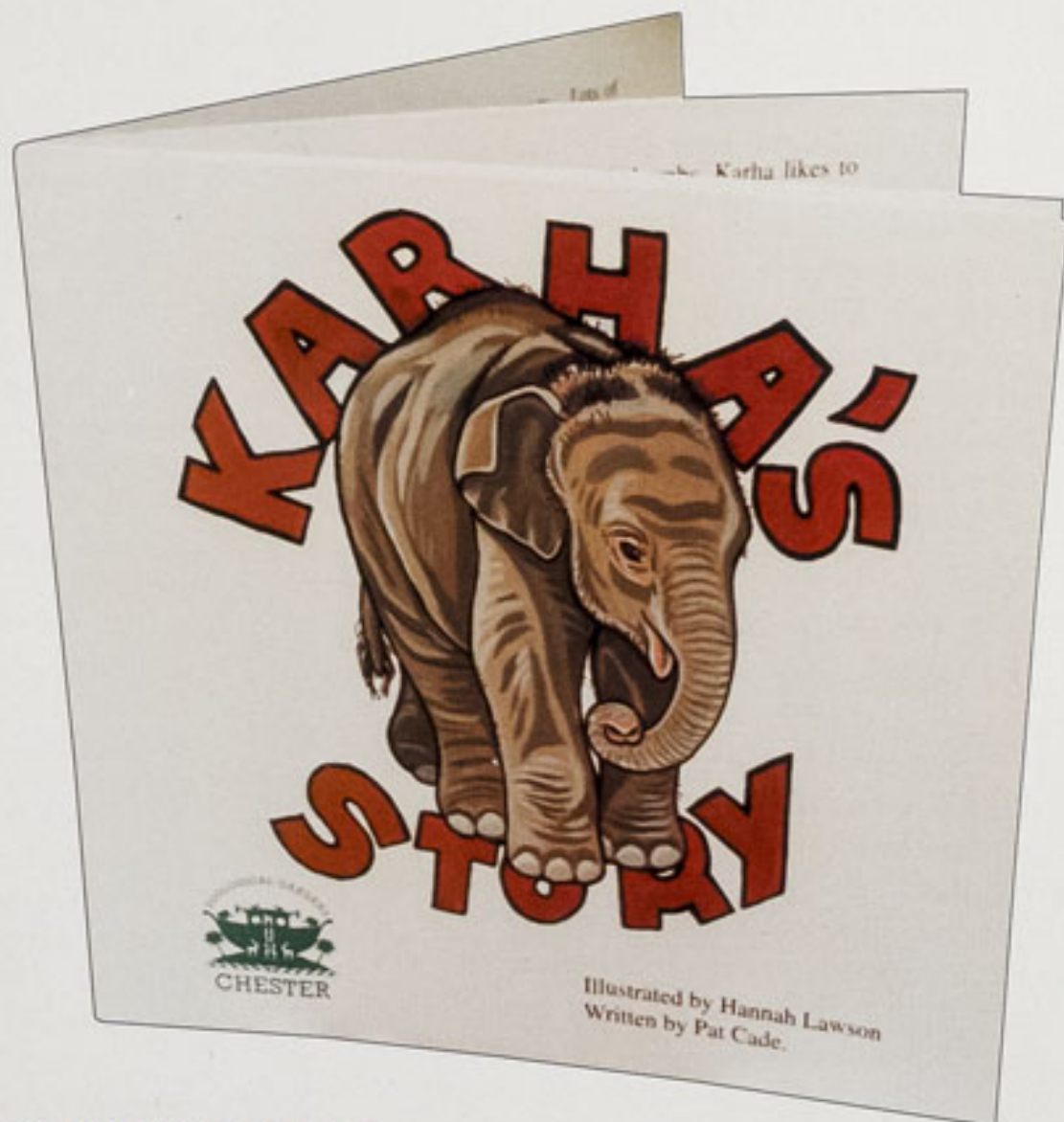
During the summer months, the zoo has been host to many foreign students of animal science.

Personnel Manager Penny Rudd has organised the trips and arranged accommodation for three from the Van Hall Instituut in Holland; two from the Agricultural University of Delft in Holland and others from Hungary, Spain, Germany and Eire.

## WELCOME GRAPHICS

The stark 'newness' of the zoo entrance, operating since June last year, has gradually taken on a softer look as planting has become established.

The new graphics which were erected this summer have added considerable style and interest. Designed and executed by Turtle Graphics, the images feature animal silhouettes bordering a centrepiece of the new 'Noah's Ark' logo.



## KARHA'S BOOK

Karha may be only eight months old – but she already has her biography published! 'Karha's Story' is a full colour children's book, beautifully illustrated by Hannah Lawson and written by the zoo's Public Relations Officer, Pat Cade.

'Karha's Story' is aimed at 4 – 8 year olds, and is on sale in the zoo shops and in leading bookshops in Chester, Liverpool and Birkenhead. The price is £2.99 in our zoo shops. It is also available by mail order at £3.50 to include postage and packing.



## NEW ZOO VIDEO

'Coming soon to your screens' will be the new Zoo Video, which is now being edited and will be available later in the Autumn from the shops. Likely retail price will be £9.95. With extensive coverage of Karha, Mia the baby giraffe, the orang utan youngsters, the penguin walk and lion cubs, this production will be a constant reminder of the zoo's breeding successes. We would like to thank everyone for their enthusiastic co-operation and patience during filming!

## CAR PARKING

From time to time, we receive comments from members that they have been asked to park their cars in the ordinary or in the overflow parts of the new car park, rather than in the reserved sections at the front. The reason for this is that the Groundstaff always try to keep some spaces for disabled drivers close to the entrance for the frontal parking bays are for both members and disabled. Clearly, with adult membership well over 6,000, we simply can't have a reserved car park space for everyone - for it would more than fill the whole of the tarmac car park!

## ARK EXCURSIONS

Noah (aka Chris Vere) and the Ark have been around the 'patch', telling and selling folk the benefits of a zoo visit. They have been in Wythenshawe Park, Manchester; Grosvenor Park, Chester and at Whitby Park, Ellesmere Port. As well as the life size Karha model, display boards and a chance to explore the Ark itself, face painting has been extremely popular.

## ZOO OUTREACH

In previous issues, we have carried reports on how the contributions the zoo makes to the Zoo Outreach Organisation in India are being used. Earlier this year, we had the opportunity to hear first hand, when Nibha Namboodiri, ZOO's Technical Assistant visited Chester, as part of a zoo management training tour. Nibha had just completed a project to co-ordinate, monitor, record and translate the first Mahout Training Course in India, which took place in Kerala. This course was very significant to elephant keepers, in enhancing their professionalism and introducing them to new theoretical as well as practical, traditional knowledge.

Sally Walker, the Director of the Zoo Outreach Organisation, writes: 'We owe a special thanks to ALL Chester Zoo staff for teaching Nibha many things.'

## NEW EDUCATION HEAD

The zoo's new Head of Education Services takes up the post on 1st November. He is Stephen McKeown, currently Deputy Head of Education at Edinburgh Zoo. There were over 100 applicants for the post, and in a highly competitive field, Stephen was chosen from a final short list of five.

*Zoo Life* asked Stephen for some notes on his background - and this is his own version!

'Stephen was born in St Andrews, Fife, in the 1960's. An important part of his childhood education was spent unofficially in Glasgow Zoo, sneaking in most Saturday afternoons through a hole in the fence behind the red-necked wallabies.

'After school he completed a biology degree at Stirling University and, rather ironically, ended up as an Assistant Education Officer at Glasgow Zoo. Then followed a ten week expedition from Cairo to Khartoum. After this, Steven decided on journalism as a career, and joined the *Sunday Post* as a reporter, writing human interest stories, and, for reasons never explained, the weather forecast.

'Ten months of this was enough, and he left to study for a post graduate teacher training certificate. Not over enthralled at the prospect of teaching biology in downtown Glasgow, Steve decided on the Kalahari Desert as a better option and flew off to Botswana where he taught local kids (some older than himself) for around 18 months. Then back home - to an appointment as Senior Education Officer at Edinburgh Zoo.

'His extra-curricular activities have included an 'Animal Expert' slot on a children's Saturday morning TV programme; leading wildlife safaris to Madagascar, the Galapagos and the Amazon, and working as a presenter for BBC Radio Scotland.

'I'm delighted to be joining Chester Zoo and look forward very much to the challenges that lie ahead in developing the Education Service to its fullest potential.'



▲ Stephen McKeown, Animal enthusiast and communicator



◀ The highlight of Nibha's trip was meeting Karha.

## GIFTS OF MOBILITY

We now have three, 4-wheel electric scooters available for visitors with mobility difficulties. They are garaged close to the staff entrance, and can be pre-booked via the switchboard operator. Reserved parking spaces (for three cars) are close by. There is no additional charge for use of the scooters, beyond the standard disability admission rate.

We must thank Council Member Miss Jean Dixon, whose enthusiasm for this project has been so well rewarded and Mrs Eileen Ham, Life Member from Upton, who has made a major contribution to the cost of the first vehicle in memory of her husband, Dr John Ham, who died last year.

Next we must thank Ed Pearson of Chester Mobility Centre, for his liaison with the City of Chester's Access Officer, Tim Metcalfe. This resulted in the City's Access Committee approval for funding the second vehicle, after an interesting 'demonstration morning' at the zoo, with Miss Dixon and Tim showing that the vehicles are easy to drive. The generosity of Ross Care Centre, 140 Chester Road, Whitby, Ellesmere Port, has provided the third vehicle on a long term loan basis.

Readers who would like to know more about these vehicles can get more information from Ross Care on 0151 355 9919 (Mr David Hakin) or from Chester Mobility Centre (01244 377363.)



◀ Jean Dixon takes the first ride.

## ZOO WEDDING

There's something about working in the zoo that frequently leads to staff romances!

Latest zoo couple to tie the knot are bird-keeper Chantelle Veltkamp and joiner Paul Lindop, who were married in May. Gardens Foreman, Chris Williams made Chantelle's beautiful wedding dress. Good luck to the happy couple!

## A CENTENARIAN'S TREAT

A very special treat was arranged for 100 year

old Mrs Florrie Fynn, by her son Harry. Mrs Flynn has had a life-long wish to get close to an elephant. So when he telephoned to book her a ticket for one of our 'Elephant Experience Evenings,' the staff determined to make it a memorable occasion for her,

by offering a complimentary elephant adoption.



## TIGER WEEK

This special week, designated by the Federation of Zoos to raise funds for tiger conservation projects in Siberia, Sumatra and India, was a huge success.

The fund-raising is continuing throughout the summer, and it is expected that the total raised will be close to £100,000.

The week was also very successful in raising awareness for the plight of the tigers, with publicity about the campaign on several national television and radio programmes, as well as in the press.

Chester Zoo raised over £1,500 during the week, with activities that included a giant tiger jigsaw.

About 25% of that sum was raised by Senior Keeper Phil Whalley, who – as the picture shows – bravely undertook a sponsored parachute jump!



◀ Happy Landings! Phil is glad to be down to earth.

## TOP ANGLER

Wendy Locker, of our retail staff, was chosen as one of the six-strong team to represent England in the Ladies World Angling Championship in Budapest in August.

She came home with the Silver medal – making her No 2 in the world!





▲ Steve Hogarth

# FROM CHESTER ZOO TO GASHAKA GUMTI

*Research Associate Steve Hogarth writes about his recent field trip to Nigeria to study the chimpanzee population in a National Park.*

Following in the footsteps of Nick Ellerton and Dr Caroline Harcourt, I recently embarked upon a four month chimpanzee (*Pan troglodytes troglodytes*) survey of Gashaka Gumti National Park, Nigeria. The aim of the fieldwork was to assess the chimpanzee population's current status and complete the necessary groundwork for the degree of Ph.D. (of Manchester Metropolitan University). This three year study will concentrate upon the relationship between chimpanzee social behaviour and ecological constraints, allowing the formulation of long-term conservation strategies for the chimps.

In February I flew to Lagos with Richard Barnwell, the World Wide Fund for Nature [WWF-UK] conservation officer for Africa. Richard's tireless work over many years has been the main thrust behind Gashaka Gumti's development. It was then onto Abuja for a meeting with the Director and Chief Executive of Nigeria National Parks, Alhaji Marguba and Ako Amadi, the Nigerian Conservation

Foundation's [NCF] Director of Technical Programmes. An action plan was formulated and the necessary logistical support sanctioned.

Once at Gashaka village I was pleasantly surprised to find that my allocated house exceeded all expectations. Despite the lack of running water and electricity it seemed luxurious after a couple of weeks in the bush. Faith Ananze, the NCF Project Manager and Andrew Dunn, the WWF-UK Park Planning Co-ordinator, made recuperation even more enjoyable by their generous hospitality and unlimited supplies of beer!

A day in the field started at

dawn with the six of us gorging huge quantities of breakfast, knowing that the next main meal would be a gruelling nine hours away. Jibrilla, a talented and imaginative cook, enterprisingly garnished the staple diet of rice, maize flour, beans and fish with bush delicacies such as spinach, ginger and mushrooms. Occasionally he dug up various roots and stems with medicinal properties to carry back to Gashaka village. Rather surprisingly he predominantly collected aphrodisiacs!

Throughout the day our party fell under the watchful gaze of Salamu Waziri, who had once hunted buffalo in the park but is now a game guard. Salamu's bush skills were impressive and his ability to track animals amazing. The perfect combination of Salamu's mental map of the park and a satellite navigation system undoubtedly simplified progress through the mosaic of lowland gallery forest, savannah woodland and montane forest. Since the park is 6,500 sq km, fieldwork was restricted to the southern half with each trip lasting approximately two weeks. A distinct lack of roads meant that exhaustive footslogging was the norm and by 7 pm I had usually retired to my tent, totally worn out by the day's activities.

Chimpanzees past infancy normally build a new nest every evening and these were frequently spotted. The lifespan of a well-constructed night nest can reach five months. Nest age could only be loosely categorised (fresh, new, old and decaying) but an estimate of nest group size was possible with fresh nests. These nests always brought a smile to Salamu's face and he deftly climbed into many, collecting hairs for Katie Gonder from Hunter College, New York. Using DNA analysis she is investigating the relationships between chimpanzee populations scattered across Nigeria. It soon became apparent that Gashaka chimps preferred to build their nests in areas of dense, high vegetation although savannah-woodland sufficed occasionally. At one popular sleeping site in thick gallery

▼ Two of Chester's Chimps.



forest. I recorded fifty-four old nests in a similar degree of decomposition.

The survey sampled large areas in a relatively short period of time and consequently, chimpanzee sightings proved to be rare events. However, sighted subgroups averaged ten individuals who usually allowed observation from a mere twenty metres. A sure sign that they are not actively hunted! Such proximity implies that habituation (a process whereby chimps are contacted frequently enough for them to tolerate humans) is indeed viable for a single chimpanzee community within the park.

Loud screams of alarm indicated that the chimpanzees had been alerted to our presence. These vocalisations generally fizzled out fifteen minutes after their first visual contact with us, leaving the group settled but still wary. Watching a male thumping enormous buttress roots, I soon realised why the local Hausa name for the chimpanzee is *Biri maiganga* – 'the monkey with the drum'. None of the groups encountered became excited enough to charge or attack us. However, peaceful behaviour is not always so forthcoming as Andrew Dunn and Salamu found to their cost last year, when they startled a small group of chimpanzees that subsequently hurled rocks at them.

Fortunately for Gashaka Gumti's chimpanzees the local people are principally Muslim and do not eat primates.

Furthermore, poaching is policed effectively by National Park Service Game Guards who mount regular patrols. My team made an ideal additional anti-poaching unit when we trekked to the more remote regions of the park.

Although a rough calculation indicates a population of around two thousand chimps, more research is necessary before an accurate estimate can be achieved and my project completed.

It was both a privilege and a pleasure to work in such an unspoilt wilderness as Gashaka Gumti and fulfill a long standing ambition to study chimps in the wild. Later this year I hope to return to the park and resume my work while based at the planned WWF-UK/Nigeria National Park Service centre for primate research.

My grateful thanks to the following for their generous support :

- World Wide Fund for Nature (UK)
- Nigeria National Park Service
- Nigerian Conservation Foundation
- Chester Zoo
- Manchester Metropolitan University
- The Linnean Society –
- and the many other people who helped me with the project.



▲ Salamu (centre), Jibrilla (far left) and the tireless porters who made life in the bush seem fun.

► Salamu collects chimp hairs for DNA analysis from a fresh nest.

▼ Dense montane forest proved to be an ideal habitat for chimps, but an inhospitable one to their observers.





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A FEW OF THE LATEST ARRIVALS IN THE BIRD SECTION



# CAPTIVATING CHICKS!



Top: Spectacular Spectacled Owls  
(Courtesy Mirror Group Newspapers)

Left: Caring for Karha. Student Jo-Anne Mosley believes she had the ideal job, before going back to University this Autumn.

Centre: Just a couple of the 29 penguin chicks hatched this year.

Bottom: Red-crowned Crane chicks with parent.  
(Courtesy Mirror Group Newspapers)



▲ The "Things To Do" shop is stocked with many items designed by FEDs and education staff.

# OUR FLEXIBLE Stimulating and Rewarding FEDS!

The idea of recruiting volunteer help came from Brenda Norgain, then Head of the Education Division, and who has since retired. The acronym FEDS - Friends of the Education Division Services - was also coined by Brenda.

We currently have 73 active FEDS, and a further 12 currently in training. Of the volunteers who originally joined the scheme in 1986, we still have four who regularly give their time and expertise in various activities.

## A FED'S FUNCTION

The list of FEDs' activities around the zoo has grown over the years and now they offer: *short public tours; Touch Experience carts for reptiles, invertebrates, the aquarium and the*

*In May, our stalwart volunteers, also known as The FEDS, celebrated their tenth birthday.*

*There are no Over-FEDS or Under-FEDS - all FEDS are equal!*

*elephants; 'Let's Make Centre;' brass rubbings; 'Things to do' shop; storytime; evening 'Perambulations'; public talks, to groups outside the zoo; office work; Christmas Journey; library cover; help with special events; DIY jobs, woodwork, painting, needlework . . . A FED must be flexible!*

## FOUR FOUNDER FEDS

Sonia Price joined right at the beginning of the scheme in May 1986 and still helps in the Brass Rubbing Centre on busy Bank Holidays. Cynthia Bergstrand joined in June '86 and works mainly in the Brass Rubbing Centre.

Violet Brickland also joined in June '86 and is still to be found in the Let's Make Handicraft Centre, as well as other activities such as the Puppet Theatre and 'Storytime'. Thelma Ackroyd joined in September '86 and is one of our Saturday regulars, usually taking out the aquarium cart. She also acts as a zoo guide and gives public talks. Her husband, Ron, was roped in as a FED in November '93.

# FEDS' FABLES

By Thelma Ackroyd

'When a mate arrived for the male Red-crowned Crane, everyone hoped for the early arrival of chicks. We noted when the female started to sit, and were told that incubation is about 30 days. So at about that time, I brought in my camera. In the morning the female was still sitting. On my way out, I strolled over again, on the off chance that a chick had appeared during the day. I could see

she was still on the nest, but just as I arrived, she made a slight sound, got up and looked down at the nest. At that moment the chick emerged from the egg, and I got my picture! It isn't a good photograph as it is through the wire mesh and was hurriedly taken, but it is a record of the hatching of the first Red-crowned Crane at Chester Zoo. So - I adopted them!



▲ A 'touch cart' at the Tropical Realm.

▼ Below right: The FED's 10th birthday party, in Oakfield House.



By Bill Fletcher

The occasion - a school party on the Christmas Journey. The scene - the Camel House.

Steward: 'Would the children like to smell the Frankincense?'

Teacher: 'Oh, yes! Listen children, you are going to smell the Frankincense!'

Steward offers sniffs of Frankincense all round.

Teacher: 'Have you got Myrrh?'

Steward: 'Well, yes but . . .'

Teacher: 'Children, now you can smell the Myrrh!'

Steward (in low voice): 'How do you explain what it is to such young children?'

Teacher: 'Why - what is it?'

Steward: 'It's embalming fluid.'

Teacher: Oh - I didn't know that!

So the steward goes round letting the children smell it, some of them pulling disgusted faces. Then one lad looked me in the face (yes - I was the steward) and says 'Can you drink it?'

And finally, FED Dorothea Fisher, appeals for new recruits:

'If you are looking for stimulation and rewarding work, I would strongly recommend becoming a FED. You'll be working with a group of very helpful and caring people and you'll learn a great deal about the zoo and the care of the animals.'

## FED FACTS AND FIGURES

Over the past ten years FEDS have:

- ★ Donated about 90,000 hours of their time to the zoo
- ★ Had contact with around 659,000 zoo visitors (including Christmas Journey numbers)
- ★ Generated about £77,000 revenue for the zoo.



## NEW ISLANDS FOR MONKEYS

You will have noticed the tremendous amount of activity and excavation going on around the monkey house. Work is under construction for a major, exciting new zoo feature, that will be opening in early Summer next year. This will bring the monkey area up to the same innovative standards that the zoo has achieved for chimpanzees and orang utans. It involves three large island sites, surrounded by water filled moats. There will be extensive landscaping and waterfall effects, providing an ideal environment for various monkey species. The plans also include a fourth large, netted, external enclosure. There will also be a comprehensive internal refurbishment of the existing monkey house, including a large extension at the public entrance, vastly improved facilities for the keeping staff, and greatly increased enclosure size.

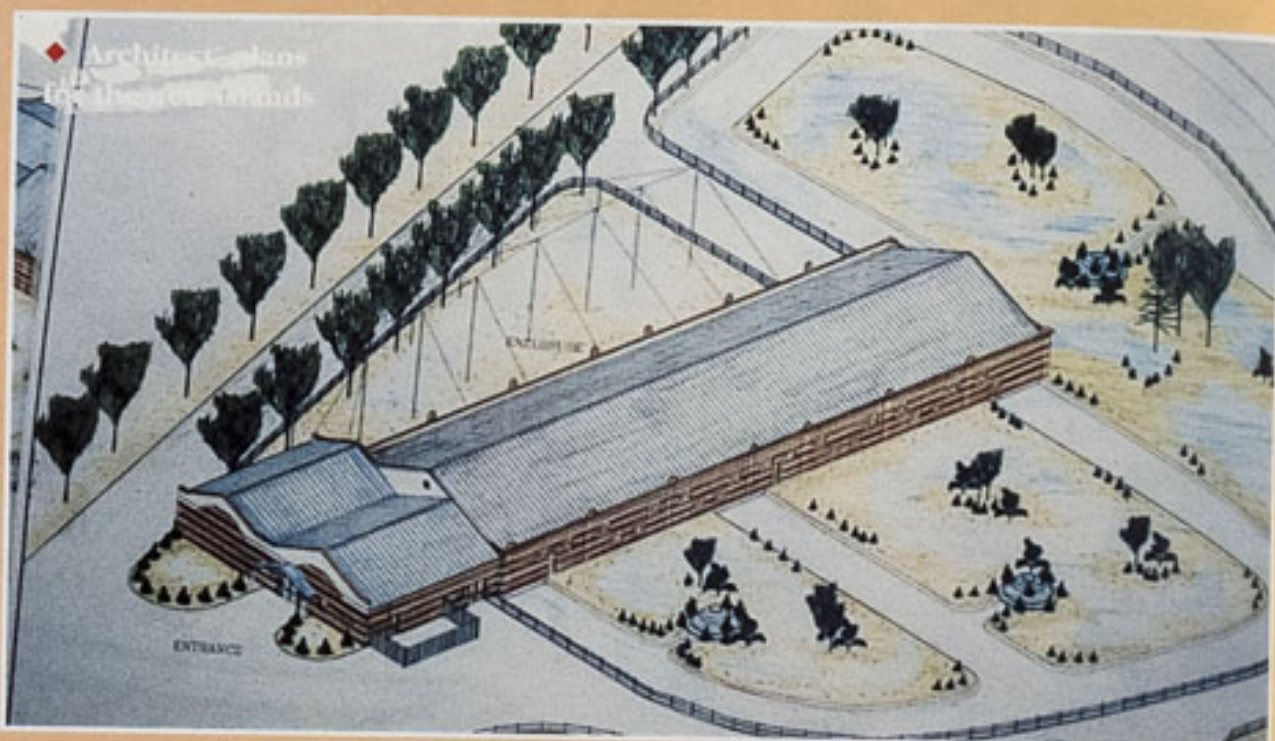
### A ZOO CHRISTMAS

Sorry to give such an early warning of the Christmas season - but by the time the next issue of 'Zoo Life' is printed in early December, it will be too late for you to take advantage of all the good things in store at the zoo!

### CHRISTMAS JOURNEY

Everyone who has been on the Education Division's 'Christmas Journey' in previous years will agree that this is an enchanting evening.

Run over **eight** nights in December,



small family groups will be taken round the zoo by one of our volunteer guides to meet a whole host of the characters and animals related to the Nativity story, and hear the fascinating accounts of their 'journey.'

Father Christmas and his reindeer will be resting in the zoo before continuing their long journey, and there will be a chance to chat to the Old Gentleman and receive a small gift.

A booking form is enclosed with this issue of Zoo Life.

**Please remember** - places are limited and we know from previous experience that they sell out very quickly. To avoid disappointment, please return it to the Education Division as soon as you can.

Please remember to indicate at least three choices on your form, in case your first and second choices are already filled.

### SHOPPING FOR GIFTS

Our splendid 'Ark Shop,' opened just before last Christmas, is a

wonderful, one-stop store for gift shopping. You'll find a selection of unusual, animal-themed items here, many of which are unobtainable in the high street stores. Don't forget to produce your membership card before you pay at the till, to claim a generous 10% discount. If you really can't decide - **why not buy a zoo gift voucher?**

### FATHER CHRISTMAS

It is the habit of Father Christmas to spend his December weekends in Chester Zoo, for reindeer training! He will be settled into Noah's Ark, and 'at home' to young visitors from 12 noon on December weekends, starting Sunday 1 December, and also on the last few days before Christmas, when the schools have broken up for the holiday.



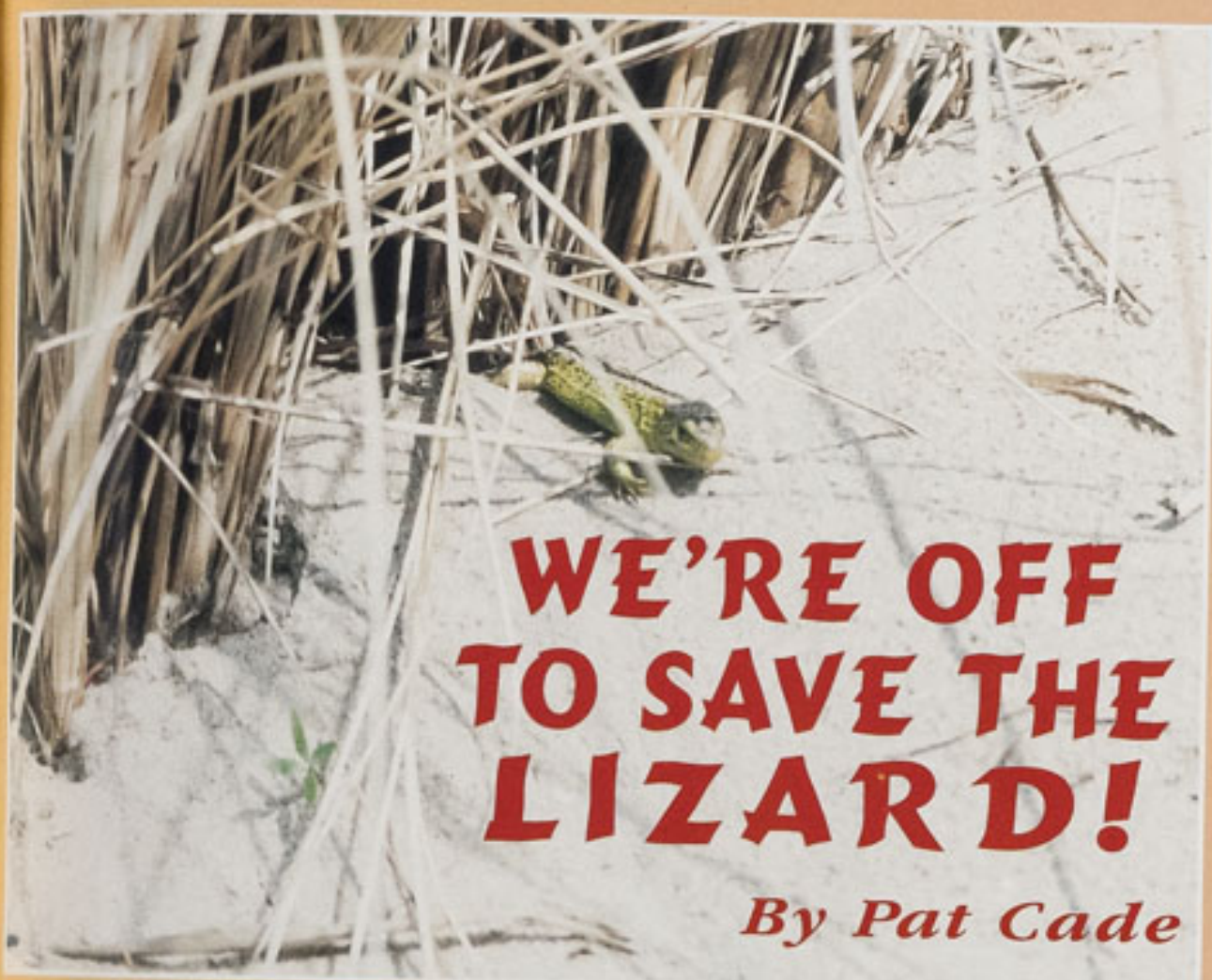
### CHRISTMAS IN THE OAKFIELD

The Christmas menus are now available, and already bookings are coming in for lunch and evening meals. Christmas lunch will be served every day between 12 noon and 3 pm in the restaurant from 2nd December - 5th January, with the exception of Christmas day. Cost is £12.95 adults and £7.50 children.

The restaurant will open for evening dinner during December on the following dates: 13th, 14th, 17th, 18th, 20th and 21st. Dinner will be served between 7-9 pm. Cost is £15.50

**Advance booking is essential** - please ring Jane or Sue on extension 209.





## WE'RE OFF TO SAVE THE LIZARD!

By Pat Cade

Life is not easy for a British sand lizard! Cold-blooded animals need lots of warm sunshine - and that's not on constant supply in the UK! Sparse sunshine, plus the problems of heathland destruction and increasing hordes of tourists walking over the sand-dunes, have left these creatures rather thin on the ground.

Sand lizards (*Lacerta agilis*) are the most endangered - and the most beautiful - of Britain's three native species. Once there were thriving populations throughout the dunes and heathlands of southern England, in the North West and in North Wales. But today there are less than 6,000 breeding individuals left in the UK - in Dorset, Surrey and Merseyside.

Because of the continuing threats to its existence, the lizard is being conserved by a project taken forward in partnership with English Nature (through its Species Recovery Programme); Herpetological Conservation Trust; the Worldwide Fund for Nature and the Countryside Council for Wales. Dr Chris Tydeman, WWF's Head of UK Conservation, believes that this recovery programme is vital to the survival of the lizard.

The zoo's new vivarium has been carefully designed to provide the best possible environment for breeding. The sand lizard's native habitat is mature, dry heathlands and coastal sand dunes in areas dominated by dense marram grass. The vegetation provides the conditions which allow the lizard to regulate its body temperature and to find cover from predators.



This is mainland Britain's only indigenous egg-laying lizard, and it needs areas of open sand for incubating its eggs, which are laid in late spring, in burrows dug in the sand. They are warmed by the sun until they hatch in late Summer.

This is not one of the most visible of the zoo's attractions! Sand lizards like to live in burrows or underneath vegetation. The best time to catch a glimpse is probably in the early morning or late afternoon sunshine. Having preyed upon a variety of insect life, the lizards return to their burrows in the evening, and remain inactive overnight.

The Herpetological Conservation Trust provided the first sand lizards for the vivarium, and hopefully there will eventually be hundreds of youngsters bred here for release into carefully selected and protected sites in the North West Region.

Keith Corbett, of the Herpetological Conservation Trust, lists the objectives of the project as:

- Maintain and enhance existing populations.
- Re-establish populations on representative habitats in the species' former range.
- Provide a better understanding of the management needs.
- Disseminate this information
- Promote the future conservation of the species.

◆ Cartoon reproduced by kind permission of Coastlines Magazine



# JUNIOR MEMBER

## KNOWSLEY SAFARI PARK

**Saturday 28th September 1996**  
(Please note that this is a change of date and a change of venue for September 1996)

This is a chance to have a guided tour (on a bus) with the Curator of Knowsley Safari Park. The bus will leave the staff car park at 10.30 am, returning at 4.00 pm. Over eights are invited to join us and you will need to bring a picnic.

## TATTON PARK

**Saturday 19th October 1996**  
A popular visit for Juniors. We will spend the morning visiting the Home Farm at Tatton, and then a tour of the park with a Warden and a chance to witness the Red Deer Rut in these beautiful surroundings. Dress warmly and bring a picnic. We will be leaving the staff car park at 10.30 am, returning at 4.00 pm.

All over-eight year olds welcome.

## LOWER MOSS WOOD

**Saturday 16th November 1996**  
This will be a new visit for Juniors when we go to Lower Moss Wood near Knutsford. A warden will accompany us on the Native Woodland Walk, when we will visit the bird feeding stations, and bird hides. Depending upon water levels, we may do some pond-

dipping and we will also have the chance to see the work being done at this well-known native wildlife hospital.

The bus will leave the staff car park at 10.30 am, returning at 4.00 pm. Over eights are welcome to join us.

## THE CHRISTMAS PARTY

**Friday 6th December 1996**  
This ever-popular party is a chance for Juniors 'to let their hair down' in style and, as usual, it will be held in the indoor picnic area behind the Tropical Realm. Over seven's are welcome to come along, enjoy the music, games and hot-dog supper. Please bring a pillow or cushion to sit on! Juniors should arrive at the OLD (Caughall Road) ENTRANCE at 7.00 pm and parents may collect from there or the party area (bring a torch) at 10.00 pm.

## THE CONTACT SESSION

**Saturday 25th January 1997**  
One of our most popular events during the year, when Juniors will have the opportunity to meet some of the Zoo's friendlier residents. Over eights should meet outside the Oakfield for 2.15 pm and we will walk to the indoor picnic area to meet the animals, which are likely to include, snakes, spiders,

tortoises, rats, lizards, goats, rabbits, guinea pigs, wallabies, ducks, doves, ferrets and maybe a few surprises! The older Juniors can drift away after 3.30 pm and the remainder will be taken back to the Oakfield to meet parents there at 4.00 pm.

## LIVERPOOL MUSEUM

**Saturday 22nd February 1997**  
We have planned a visit which will incorporate seeing behind the scenes, including the zoology and taxidermy sections, at the Liverpool Museum of Natural History. A chance not to be missed on a chilly February afternoon. We will leave the staff car park at 10.30 am, returning to the Zoo for 4.00 pm. Juniors over eight are invited to join us and you should bring a picnic lunch.

## TRACKS & SIGNS

**Saturday 22nd March 1997**  
We choose March for this event as it is usually the muddiest time of year, so please come prepared! We will be finding footprints in the enclosures at the Zoo and making plaster casts from them. Over eights are invited to join in this ever-popular event, and you should bring a picnic and wear old warm clothes and wellies.

*Meet outside the Oakfield at 11.00 am and arrange to meet parents back there at 4.00 pm*

# YOUR NEW PROGRAMME OF MEETINGS AND FIELD TRIPS

## AUTUMN 1996 - SUMMER 1997



### DUDLEY ZOO

Saturday 26th April 1997

This proved a very popular trip when we last visited Dudley Zoo a few years ago. We will be leaving the staff car park at 9.30 am, returning at 5.30 pm. Over eights are invited to come along, and you will need to bring a picnic lunch.

### THE CHESTNUT CENTRE

Saturday 24th May 1997

Anyone who has visited this beautiful spot in Derbyshire, will know what a lovely day is in store when we visit the birds of prey and several Otter species in their pretty 'bluebell wood' surroundings, at The Chestnut Centre. This will be an opportunity to see the rare Giant Otters, the only ones in the UK.

The bus will leave the staff car park at 9.30 am, and return at 5.00 pm, and over eights are invited to bring a picnic along.

### HILBRE ISLAND

June 1997 -

Date to be determined.

Watch this space for details of our trip to Hilbre Island. As soon as we know the tide timetables we will issue the times for leaving the Zoo.

We will walk from West Kirby over to Hilbre Island to see the seals and do some rockpooling. Over tens will be invited to come along.

### A 'DAY WITH A KEEPER'

Wednesday 23rd July 1997

We have to limit this exciting event to Juniors who are a minimum of twelve years old as it can be very hard work. Juniors will spend a day working alongside a zoo keeper learning about their job and some of the animals they look after.

The meeting point will be outside the Oakfield at 10.30 am, and the day will finish at 4.00 pm when Juniors will return to the Oakfield for collection. Bring along a picnic and wellies.

### SUMMER BARBEQUE

Friday 15th August 1997

The summer barbeque is a time to look around the Zoo at dusk on a guided tour before enjoying some food cooked over the barbeque coals.

There may be some surprises in store. Juniors over eight are invited to enjoy an evening in the Zoo, and they should arrive at the Staff Entrance at 7.00 pm and walk through the Zoo to the Jubilee cafe, and should be collected from the Jubilee at 9.45 pm.

### THE FOLLIES - HAWKSTONE PARK

Saturday 20th September 1997

We will travel to the Shropshire hills to discover the

surprises of the follies and caves on the nature ramble at Hawkstone Park. This is a fairly strenuous, but very pretty walk and over eights are invited to join in. Good comfortable shoes, will be necessary, together with a picnic lunch. We will leave the staff car park at 10.30 am, returning at 4.30 pm.

Please note: Bookings must be made for all events.

Please ring Penny on:

01244 380280 extension 215, not more than 2 weeks before the event. It's 'first come, first served' - and places may be limited. A small charge to cover costs will be made for events involving transport, materials or foods. ***This list is provisional, and in exceptional circumstances we may have to alter dates and venues. Where possible any changes will be announced in Zoo Life - not by individual letters, so make sure you keep up to date by reading your pages in each issue!***

Can you identify the animal footprints on these pages?

They belong to:

tiger; caribou; elephant; zebra; coati and rhino - but which is which?

Answer overleaf.

More Junior news on the next two pages!



## ENDOROFTA SCHOOL ON SAFARI



▲ This is the truck that will take the children on the safari YOU have paid for!

## THANKS TO CHESTER'S JUNIOR MEMBERS!

*In the last issue we reported on the success of our fund raising to send children from a Tanzanian school on safari.*

*Senior Members Elizabeth and Brian Livingstone have visited the school to present the cheque – this is their report:*

The Junior Members raised an amazing £300 to provide a safari trip for Tanzanian children to visit the world famous Serengeti National Park. These children from Endorofta Secondary School live on the borders of the park, but because park fees are high and transport is so expensive, they are quite unable to afford a visit there.

If we are to encourage people to conserve their wildlife, then they must be able to see and enjoy it themselves, rather than simply preserving it for foreign tourists to visit.

The safari itself will be organised by Gibbs Farm safaris, a local and reliable company operating in Tanzania. They had previously, at their own expense, taken other groups from the school. One of the safari lodges on the Serengeti provides the accommodation free of charge.

We visited the school earlier this year to present the donation to one of the school governors and

THE SCHOOL HAS VERY LITTLE IN THE WAY OF BOOKS AND MAGAZINES ABOUT WILDLIFE. THE BOOKS THEY DO RECEIVE ARE STANDARD SCHOOL BOOKS FROM OVERSEAS DEVELOPMENT MONEY. IF YOU HAVE ANY OLD, GOOD CONDITION, BOOKS ABOUT ANIMALS AND THE ENVIRONMENT OR WILDLIFE MAGAZINES THAT YOU DO NOT REQUIRE ANY MORE, THEY WOULD BE VERY MUCH WELCOMED AT ENDOROFTA.

PLEASE BRING THEM TO JUNIOR MEMBERS' MEETINGS AND WE WILL MAKE SURE THAT THEY ARE SENT OUT. WE MET A BRITISH TEACHER OUT THERE, WHO WILL BE PUT THEM IN THE SCHOOL LIBRARY.

the deputy headmaster. We were shown around the school and talked to the children about the safari they had been on we told them all about Chester Zoo and the Junior Members.

To win a place on these safaris, the children were asked to write an essay about their school and the Mali Hai Wildlife Club that they belong to. These essays were shown to the Junior Members at the Christmas party, along with photographs of the school.

But visiting the school itself made this so much more vivid! Electricity is only produced at weekends from a generator. Water has to be used extremely carefully since, apart from rainwater collected from the school gutters, it all has to be brought in by truck. Despite that, everything was spick and span. The children also ran an arable farm to produce some of their food.

Those who had been on the previous safari seemed to have enjoyed it immensely and there was strong competition to go on the next one – **the one that Chester Zoo's Junior Members have made possible!**

If this year's safari is also a success, then we hope to raise money to provide one on an annual basis. We will keep you informed how they go on.

From all the children about to go on safari – thank you very much indeed Juniors, for all the money you have raised.

▼ Senior pupils at Endorofta School, with Elizabeth and Brian Livingstone, far right. Look closely, and you'll see that the girls are holding Chester Zoo's guide book, and the members' magazine.



# Arrivals ○ Births ○ and Hatchings

MAY, JUNE AND JULY 1996

## MAMMALS

Seba's Short-tailed Bat	<i>Carrolia perspicillata</i>	0.0.1	Born
Red Ruffed Lemur	<i>Varecia variegata rubra</i>	1.1.0	Born
Spider Monkey (Black Face)	<i>Ateles fusiceps robustus</i>	0.0.1	Born
Prairie Marmot	<i>Cynomys ludovicianus</i>	0.0.30	Born
Lion (Indian Form)	<i>Panthera leo persica</i>	3.0.0	Born
Common Genet	<i>Genetta genetta</i>	0.0.3	Born
Onager Persian Form	<i>Equus hemionus onager</i>	1.2.0	Born
Chilean Pudu	<i>Pudu pudu</i>	0.1.0	Born
Axis Deer	<i>Cervus axis</i>	0.1.1	Born
Reindeer	<i>Rangifer tarandus</i>	3.1.0	Born
Anoa	<i>Bubalus depressicornis</i>	2.0.0	Received
Congo Buffalo	<i>Syncerus caffer nanus</i>	1.0.0	Born
Kafue Flats Red Lechwe	<i>Kobus lechwe kafuensis</i>	0.1.0	Born
Scimitar-horned Oryx	<i>Oryx dammah</i>	0.0.2	Born
Blackbuck	<i>Antelope cervicapra</i>	2.0.1	Born

## BIRDS

Common Rhea	<i>Rhea americana</i>	0.0.2	Hatched
Humboldt's Penguin	<i>Spheniscus humboldti</i>	0.0.18	Hatched
Waldraap Ibis	<i>Geronticus eremita</i>	0.0.14	Hatched
Chilean Flamingo	<i>Phoenicopterus chilensis</i>	0.0.2	Hatched
Caribbean Flamingo	<i>Phoenicopterus ruber ruber</i>	0.0.7	Hatched
Black-billed Whistling Duck	<i>Dendrocygna arborea</i>	0.0.2	Hatched
Black-necked Swan	<i>Cygnus melanocoryphus</i>	0.0.4	Hatched
Emperor Goose	<i>Anser canagicus</i>	0.0.2	Hatched
Red-breasted Goose	<i>Branta ruficollis</i>	0.0.7	Hatched
Ruddy Shelduck	<i>Tadorna ferruginea</i>	0.2.0	Hatched
Chilean Pintailed Duck	<i>Anas georgica</i>	0.0.3	Received
Melleris Duck	<i>Anas melleri</i>	2.2.0	Received
Chiloe Wigeon	<i>Anas sibilatrix</i>	0.3.0	Hatched
Ringed Teal	<i>Callonetta leucophrys</i>	0.0.5	Hatched
Marbled Teal	<i>Marmaronetta angustirostris</i>	0.0.2	Hatched
Mandarin Duck	<i>Aix galericulata</i>	10.10.0	Hatched
White-headed Duck	<i>Oxyura leucocephala</i>	0.0.1	Hatched
Red-legged Partridge	<i>Alectoris rufa</i>	0.0.1	Hatched
Satyr Tragopan	<i>Tragopan satyra</i>	0.0.4	Hatched
Golden Pheasant	<i>Chrysolophus pictus</i>	0.0.3	Hatched
Edwards' Pheasant	<i>Lophura edwardsi</i>	0.0.1	Hatched
Common Peafowl	<i>Pavo cristatus</i>	0.0.4	Hatched
Congo Peafowl	<i>Afropavo congensis</i>	0.0.1	Hatched
Gough Island Moorhen	<i>Gallinula comeri</i>	0.1.0	Received
Speckled Pigeon	<i>Columba guinea</i>	0.0.2	Hatched
Pink Pigeon	<i>Nesoenas mayeri</i>	0.0.1	Hatched
Common Bronzewing Pigeon	<i>Phaps chalcoptera</i>	0.0.1	Hatched
Mountain Witch Dove	<i>Geotrygon versicolor</i>	1.0.0	Received
Superb Fruit Dove	<i>Ptilinopus superbis</i>	0.0.2	Hatched
Pied Imperial Pigeon	<i>Ducula bicolor</i>	0.0.2	Hatched
White-tailed Black Cockatoo	<i>Calyptorhynchus funereus latirostris</i>	0.1.0	Received
Musschenbroek's Lorikeet	<i>Neopsittacus musschenbroekii</i>	1.0.0	Received
Blue-eyed Cockatoo	<i>Cacatua ophthalmica</i>	0.0.1	Hatched
Greater Vasa Parrot	<i>Coracopsis vasa</i>	0.0.3	Hatched
Princess of Wales Parrakeet	<i>Polytelis alexandrae</i>	0.1.0	Received
Derbyan Parrakeet	<i>Psittacula derbiana</i>	0.0.2	Hatched
Blue and Yellow Macaw	<i>Ara ararauna</i>	0.0.1	Hatched
Thick-billed Parrot	<i>Rhynchopsitta pachyrhyncha</i>	0.0.1	Hatched

## BIRDS continued

Blue-throated Conure	<i>Pyrrhura cruentata</i>	0.0.2	Hatched
Slender-billed Parrakeet	<i>Enicognathus leptorhynchus</i>	0.0.4	Hatched
Lilacine Amazon Parrot	<i>Amazona autumnalis lilacina</i>	0.0.1	Hatched
Cuban Amazon	<i>Amazona leucocephala</i>	0.0.4	Hatched
Green-cheeked Amazon	<i>Amazona viridigenalis</i>	0.0.3	Hatched
Red-crested Turaco	<i>Tauraco erythrolophus</i>	0.0.1	Hatched
White-cheeked Turaco	<i>Tauraco leucotis</i>	0.0.2	Hatched
White-cheeked Turaco	<i>Tauraco leucotis</i>	0.0.1	Received
Violet Plaintain Eater	<i>Musopoga violacea</i>	0.0.2	Hatched
Barn Owl	<i>Tyto alba</i>	0.0.3	Hatched
White-faced Scops Owl	<i>Otus leucotis</i>	0.0.2	Hatched
Snowy Owl	<i>Nyctea scandiaca</i>	0.0.5	Hatched
Lilac-breasted Roller	<i>Coracias caudata</i>	0.0.4	Hatched
Trumpeter Hornbill	<i>Bycanistes buccinator</i>	0.0.2	Hatched
Wrinkled Hornbill	<i>Aceros corrugatus</i>	0.0.1	Hatched
Channel-billed Toucan	<i>Ramphastos vitellinus</i>	1.0.0	Received
White-rumped Shama	<i>Copsychus malabaricus</i>	0.0.5	Hatched
Plumbeous Redstart	<i>Rhyacornis fuliginosus</i>	0.0.1	Hatched
Yellow-throated Laughing Thrush	<i>Garrulax galbanus</i>	0.0.3	Hatched
Pekin Robin	<i>Leiothrix lutea</i>	0.0.2	Hatched
Silver-eared Mesia	<i>Leiothrix argentauris</i>	0.0.2	Hatched
Mexican House Finch	<i>Carpodacus mexicanus</i>	0.0.7	Hatched
Red-checked Cordon-bleu	<i>Uraeginthus bengalus</i>	0.0.3	Hatched
Red Avadavat	<i>Amandava amandava</i>	3.0.0	Received
Gouldian Finch	<i>Chloebia gouldiae</i>	2.4.0	Received
Asian Glossy Starling	<i>Aplonis panayensis</i>	0.0.3	Hatched
Royal Starling	<i>Cosmopsarus regius</i>	0.0.1	Hatched
Bali Starling	<i>Leucopsar rothschildi</i>	0.0.8	Hatched
Red-billed Blue Magpie	<i>Urocissa erythrorhyncha</i>	0.0.4	Hatched

## REPTILES

Leopard Gecko	<i>Eublepharis macularius</i>	0.0.39	Hatched
Madagascar Giant Day Gecko	<i>Pelsuma madagascariensis grandis</i>	0.0.1	Hatched
Ornate Day Gecko	<i>Pelsuma ornata</i>	0.0.1	Hatched
Sand Lizard	<i>Lacerta agilis</i>	2.3.0	Received
Thailand Water Dragon	<i>Physignathus cocincinus</i>	0.0.7	Hatched
Madagascan Boa	<i>Sanzinia madagascariensis</i>	1.3.0	Received

## AMPHIBIA

Black & Gold Poison Arrow Frog	<i>Epipedobates truncatus</i>	0.0.5	Bred
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## FISH

Killifish	<i>Pachypanchax sakarami</i>	0.0.11	Received
Nosy Be Killifish	<i>Pachypanchax bomalonatus</i>	0.0.8	Received
Nosy Be Killifish	<i>Pachypanchax bomalonatus</i>	0.0.1	Bred
Swordtail	<i>Xiphoborus clemenciae</i>	0.0.5	Received
Halfbeak	<i>Nomorambus ebrardti</i>	0.0.11	Received
Frontosa	<i>Cyphotilapia frontosa</i>	0.0.2	Received
Peacock Goby	<i>Tateurndina ocellicauda</i>	0.0.8	Received
Peacock Goby	<i>Tateurndina ocellicauda</i>	0.0.86	Bred

Key: Col. 1 = Male, Col. 2 = Female, Col. 3 = Young or unknown, \* Rare/Endangered.

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