

# Chester **ZOO** **Life**

AUTUMN  
1988

## **This** **issue:**

- A Trip to Thailand
- Meet the Meerkats
- Barn Owls released



# Chez Nous

THE question the Director gets asked more than any other is "What's new at the zoo?". It is a particularly difficult question to answer, for something is happening all the time, and what may seem particularly significant to the Director can sound very mundane to the enquirer. Nevertheless, there is this underlying desire for things new, and there is an equally strong desire for things to stay as they are. I suppose it all adds up to "Please don't let the zoo stagnate—but don't let it change too fast for us to come to terms with it!".

One cynical colleague managed to answer this apparent dilemma by putting a wheelbarrow with a shovel leaning against it in an empty enclosure. He said it was the best exhibit, because it whetted the curiosity and brought return visits to see what happened!

Unfortunately we have had rather a lot of empty exhibits, or exhibits with wheelbarrows in them, and that situation is certain to continue. However, there is now a distinct feeling in the zoo that we are winning: that more and more things can be seen as being finished. We started the year by re-roofing the whole of the parrot house, having already re-roofed the upper arcade in the tropical house. Now the chimpanzee house is half built, the coati enclosure on the site of the old beaver pool is almost finished, and the coypu enclosure is patiently waiting for the Ministry of Agriculture to grant it a licence.

For the second year running our flamingos are hatching. We hope to see even more than last year. We have another margay kitten and, in the reptile collection, there have been 17 Madagascan tree boas hatched. So there is a lot new in the zoo, and yet we hope that what is emerging is the same zoo we all love, with better enclosures, better breeding records and better places for the public. It will take a long time to complete the task, but I am sure you will agree that we are moving in the right direction.

*Michael Bramhill*

## Members' Meetings

**Saturday, 8th October, 1988**  
2.30 p.m. in the Lecture Hall

"Where Solitude Reigns"—Mr. Roy Rhodes.

You may have heard Mr. Rhodes's talks at RSPB meetings. This audio-visual presentation will describe the wildlife of the peat moorland of Chat Moss.

**Saturday, 26th November, 1988**  
2.30 p.m. in the Lecture Hall

"The Biology of Dinosaurs from Egg to Fossil"—Dr. Beverley Halstead.

Dr. Halstead is reader in geology and zoology at Reading University and is the author of several popular works on palaeontology.

**Saturday, 17th December, 1988**

Christmas lunch, followed by a talk from Mr. Peter Wilson, Director of Dublin Zoo.

Prior booking for lunch. Price: adults £8.95; children £4.95. Tickets available mid-November from Membership Office. Please make cheques payable to Chester Zoo and enclose

stamped, self-addressed envelope for ticket return.

Members are, of course, welcome to come to the meeting without taking lunch.

**Saturday, 21st January, 1989**  
2.30 p.m. in the Lecture Hall

"The Fascination of Birds"—Rev. F. H. Linn.

**Saturday, 18th February, 1989**  
2.30 p.m. in the Lecture Hall

"Animal Behaviour in a Free Market Economy"—Dr. J. C. Barnard.

## IDEAS WANTED!

Bright ideas for outings and speakers are always welcome. Please send suggestions in writing to Mr. Brian Livingstone, Chairman of Membership Sub-Committee, c/o Membership Office, Chester Zoo.

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Chester Zoo has probably the largest colony of rhino iguanas in the UK. There are two groups, each with one male and two females. They are an endangered species, and tropical house staff are hopeful that they will breed this year

*Chester Zoo Life is edited by Pat Cade*

# WHOSE TURN FOR SENTRY DUTY?



**T**HE active, sociable group of meerkats, busily burrowing in their paddock at the small mammal house, is one of the most entertaining exhibits in the zoo.

The *Wildlife On One* television programme last year, featuring these small members of the mongoose family, created an enormous interest, and visitors constantly mention it.

The meerkat is native to South Africa, where its habitat is arid, open plain. It has a narrow, pointed muzzle, with black rings surrounding the eyes. The tiny ears are black, and almost invisible.

It is a highly sociable animal, and lives in colonies. It chatters continuously, and is very active during the day, although it can often be seen basking in the sun near the entrance to the burrow. In the wild, it feeds mainly on insects, millipedes and spiders, which it digs out of the ground.

An appealing trio of young meerkats, wriggling in the gentle grasp of the keepers' hands

**Keepers Joyce Dodd and Beryl Ramsay, of the small mammal house, think meerkats are marvellous**

Some members of the present colony came to Chester from Bristol Zoo in 1985, and were joined by another five from Ravensden in 1986. Over the last three years there have been 21 births in the group, probably all to the same mother.

In May this year, the breeding female—known as the “alpha female”—gave birth to a litter of seven. One, sadly, did not survive. Of the other six, three are thriving within the group. The remaining three were having a spot of trouble with over-enthusiastic siblings biting their ears as they tried to lift them by their necks. These three are being hand-reared.

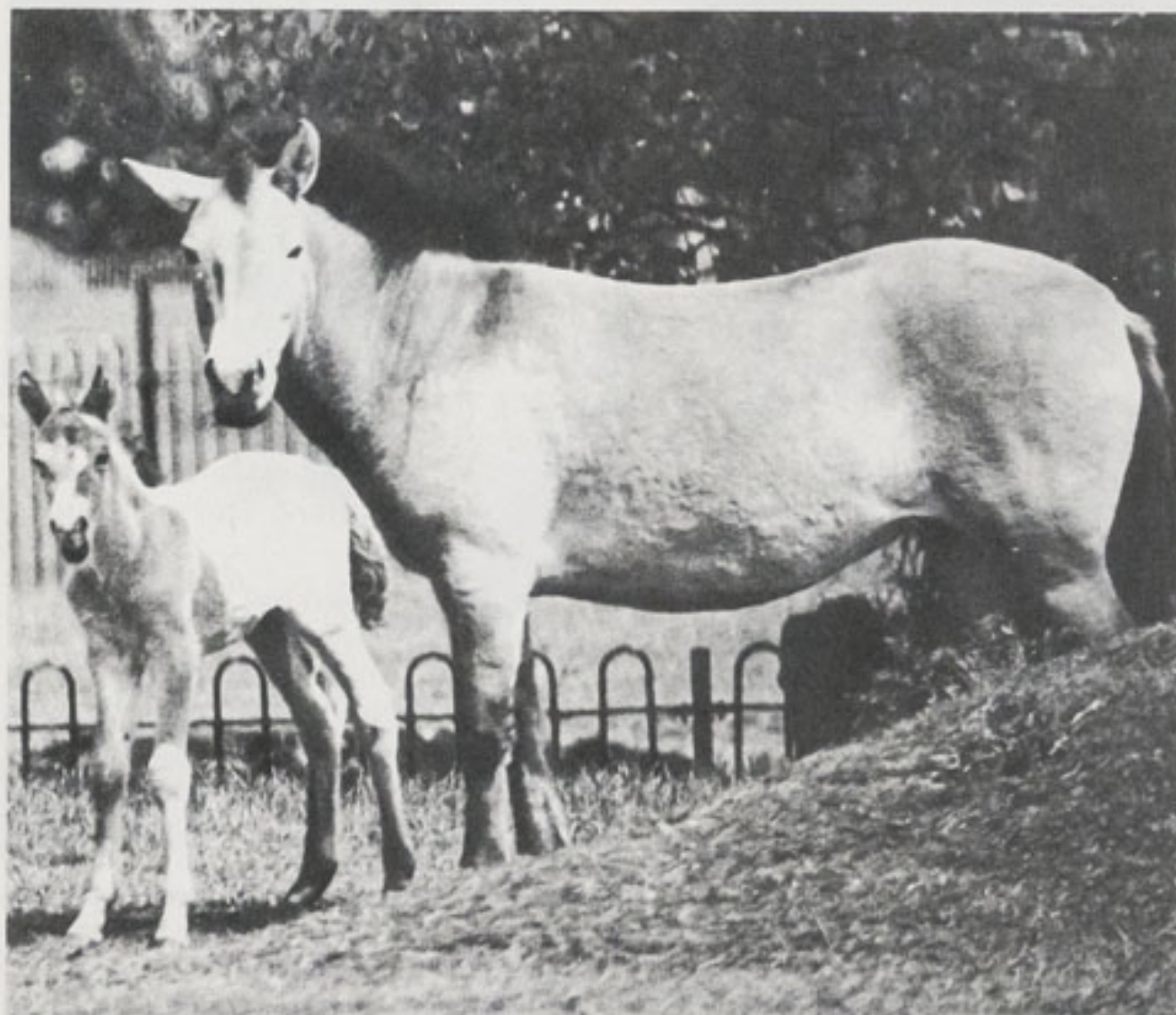
Each time a litter is born, young animals from previous litters will take the responsibility for one of the new babies. Each older sibling will take on one youngster, and stick to that youngster as guardian and teacher. For the first few weeks the babies will go back to the mother for feeding, but their brothers and sisters soon teach them to eat solids, by dangling small pieces of meat in front of their mouths, until they learn to take it.

Visitors are always fascinated and amused to see the “sentry” always on duty. Unless the zoo is very quiet, or the weather very bad, one of the animals—usually a male—is delegated to sentry duty, and can be seen at a very high vantage point, very alert, his head and eyes constantly moving, looking for trouble!

The “alpha female” is the dominant animal in the group, and her chosen mate is the leading male. The hierarchy is set by this pair, and all others have their accepted place.

# ZOO REVIEW

## BIRTH OF SULTAN



Little Sultan, photographed at a few days old, with mother Roswitha, who was born at Whipsnade Zoo in 1982

IN the spring issue of *Chester Zoo Life*, Peter Wait contributed an article on the Przewalski horse. His article ended with the hope that we might be successful in breeding a foal this year.

In May that hope was realised, when a male youngster was born to Roswitha and Bartak.

As he is such a Very Important Foal, the keeping staff decided he needed an important name, and called him "Sultan".

In 1960, the world population of Przewalski horses was just 56. Breeding programmes across the world have increased the number and now, with the help of little Sultan, it stands at over 600.

**adopta**  
MAMMAL · BIRD OR REPTILE



## Second in the country

STATISTICS just published by the British Tourist Authority show that Chester Zoo ranks second in the country for wildlife attractions.

Only London Zoo beat the 862,000 visitors who enjoyed a trip to the North's major zoo during 1987.

Chester Zoo also features at No. 14 in the Top 20 league table, compiled from more than 2,000 tourist attractions across the country.

## Exam success

TWO of our senior keepers, Paul Howse from the cat house, and Charles Mackenzie from the giraffe house, recently took the final examination of the City and Guilds Animal Management Course. They were joined in the exam at the zoo by Marnie O'Rourke from the veterinary practice. All three received a credit in the exam and a distinction in the course work, which included assignments in the course work, projects and practical assessments.

Many congratulations!

### ATTENTION ALL ADOPTERS

"ADOPTA" DATES FOR 1988

Friday, 21st October, 1988  
Saturday, 22nd October, 1988

Come and join us for a day of fun at the zoo—it is our way of saying "Thank you" to all our adopters.

Invitations will be sent out nearer the time.

Maureen Allsopp (Mrs.)  
Animal Adoption Secretary

# THEY'VE DONE IT AGAIN!



**H**HEAD gardener Eric Rudman and his hard-working team have won yet another trophy to add to their growing collection of awards.

In July, the zoo was awarded a certifi-

cate of outstanding achievement in the *Chester in Bloom* competition, organised by the Grosvenor Garden Centre.

John Johnson and Chris Williams went along to the prize-giving cere-

mony to collect the award from the Mayor of Chester. Eric Rudman was unable to attend, because he was busy escorting the judges of the *Britain in Bloom* competition around the gardens at the time!

## Welcome— in four languages

**A**S a courtesy to our many foreign visitors, the Education Division has been working on a series of translations of lists of animals and a welcome to the zoo.

First to arrive at the information kiosk was the Welsh leaflet, which has been received very favourably. There is a French and German version, but the one that has received the most interest is in Chinese!

This was produced with the help of the Chinese Information Centre in Manchester. We have every confidence in their integrity—which is just as well, since no one on the zoo staff has the ability to be a Chinese checker!

很高興您光臨柴斯特動物園。我們動物園佔地面積很大，擁有五百四十五種動物，其美麗壯觀的園林也曾獲過獎。

## A Panda for Amanda



**F**OUR-YEAR-OLD Amanda Sharp, from Warrington, had a lovely surprise waiting for her when she visited the zoo in July. As she came through the gate with her Mum, Carol, and 18-month-old brother, Jamie, she was greeted with a giant cuddly panda and the news that she was the zoo's half-millionth visitor for 1988!

The arrival of the 500,000th visitor happily coincided with a visit to the zoo of Euro-MP for Cheshire West, Andrew Pearce, who was delighted to make the presentation.

## Members' Concessionary Tickets

Price: £1.75 each

**A**NNUAL Members may purchase up to 20 tickets annually for family and friends (sold in blocks of five). Each ticket will admit either one adult or two children/OAPs. **These tickets must be purchased in advance of your visit and can only be obtained from the Membership Office—they are not on sale at the entrance gates.**

Please enclose cheque (made payable to Chester Zoo) with your postal application. A stamped addressed envelope for ticket return would be greatly appreciated by the Society.

Maureen Allsopp  
Membership Secretary

# EDUCATION OUT-OF-SCHOOLS

SCHOOLS make a great deal of use of Cheshire's countryside, its history and its specialist exhibitions. Many centres exist to help the visitors enjoy themselves more, increase their knowledge, develop their understanding and foster appreciation of their world. The Zoo Education Division is such a centre.

The Schools' Committee of the Cheshire Show wished to put on an exhibition which illustrated the work of the centres and the use made of them by the schools. A good-sized tent was provided and the exhibition focused on just five centres and five Cheshire schools which had worked in them.

It was hoped that the whole exhibition would demonstrate the high quality of work being done in schools, reflect the value of the centres in important out-of-school work and provide interest and activities for the visitors to the Cheshire Show to join in.

The exhibition really was a good one. A "pond-dipping" activity, which was organised by Langley Outdoor Education Centre, faced an exhibition of sixth form work done by Frodsham High School. Tile-rubbing and tile puzzles, organised by Norton Priory Museum, matched the display of work based on and developed from their visit by St. Wilfrid's Church of England Primary School, Grappenhall. Beeston Outdoor Education Centre and Woodlands County In-



A zoo visit inspired the pupils of Oughtrington County Primary School, Lymm, to produce this imaginative and colourful display

fants School, Whitby, Ellesmere Port, reflected their activities. Burwardsley Outdoor Education Centre and Alsager County Primary School were paired—an exhibition and a chance to touch and smell countryside items.

The zoo activity involved visitors in doing quizzes based on colour and pattern, and handling some coloured and patterned items. These activities reflected the theme of our schools' exhibition of work, which was based on colour and pattern. Oughtrington County Primary School, Lymm, really had made wonderful use of their zoo visit. The wall display of the tropical

rain forest was a full ten feet by seven feet, and the even bigger African savannah wall display was delightfully set off by a large plinth. The overall effect was superb. The range of activities, craft, art, reading, writing, just showed what can be done. The zoo's thanks must go to Mrs. Linda Pickwell, the teacher so involved in the project, and to Mr. John van Suchtelen, the headmaster, for his work and support.

We certainly had several thousand visitors to the tent, and it really was worthwhile.

By Brenda Norgain

## A Christmas Journey

PANTOMIMES and parties abound in December. Chester Zoo offers a Christmas celebration with a difference!

The staff in the Education Division have planned a very special Christmas journey. On four evenings in December, small groups will be taken to see and talk about the animals associated with Christmas.

The journey will start with the donkeys. Listen to the story of the journey to Bethlehem, and join in singing *Little Donkey*. On to the cattle house, where there will be a manger. Listen

to the story of Jesus' birth, and join in *Away In A Manger*.

Next stop the camels, where the wise men's journey is remembered in story and song.

Then, having celebrated Jesus' birth, we go over to the reindeer (moved nearer for the season), where Father Christmas will be waiting with a small gift and we will sing some more seasonal songs and enjoy a warming light snack.

We return to a point en route where the children can colour a specially-designed Christmas card or make an

animal mask. The journey will end at the Jubilee for a hot drink.

Bring torches and lanterns—in any colour except yellow, as this will be the guide's colour.

The whole journey will take around two hours, and the cost will be £3.00 per person (adult or child).

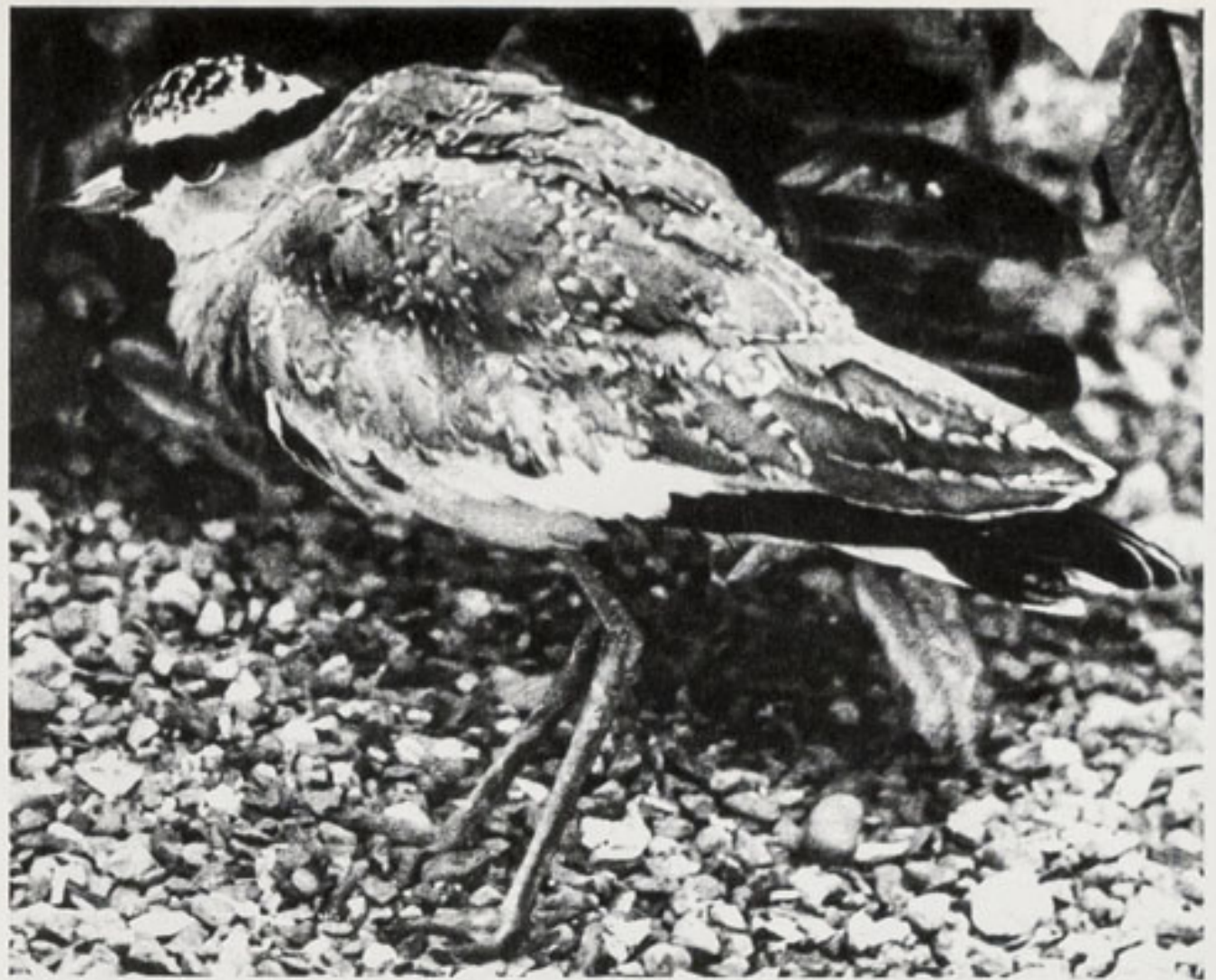
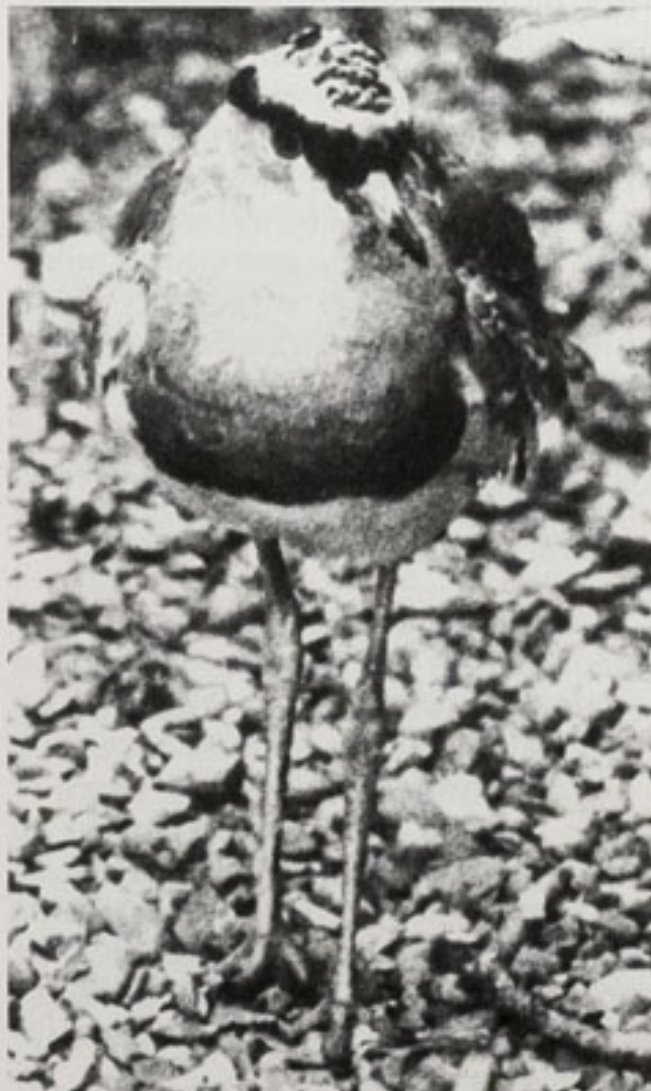
This really is a unique Christmas activity. Do come and join us! Tickets must be booked in advance for a specific date and time.

Tuesday, 6th December; Thursday, 8th December; Monday, 12th December; and Wednesday, 14th December; at 4.00, 4.30, 5.00, 5.30 and 6.00 each day. A booking form is included with the Christmas card order leaflet.

*Mike Coupe and Barry Rowley advise visitors to look hard if they want to see the "undercover plover"*

**D**URING spring and summer, our visitors, upon hearing loud piping calls, will realise that there are birds in the pebble-floored outside aviaries of the bird house. You have to take a close look to see the adult crowned plovers—so good is their brown and fawn camouflage. If you think they are difficult to see, just try to spot a newly-hatched youngster—their mottled brown down renders them almost invisible against the pebbles and, when the parents give their alarm call, the young remain absolutely motionless. The three or four eggs are even more difficult to see, looking like brown and fawn mottled pebbles. The female does not build a nest, she just lays her eggs in a scrape among the pebbles.

As with many other species of birds kept at the zoo, it is only by finding out about their habits in the wild that we are able to provide them with a suitable habitat in which to live and



## CROWNED PLOVERS

breed. Crowned plovers come from South and East Africa, and are found in dry, open areas. Like our native Ringed plover, they need pebble-covered areas on which to nest. Female Crowned plovers are smaller than the males, and have paler, red legs, but otherwise their plumage is virtually identical.

Provide your pair of plovers with pebbles of the correct size on the floor of their aviary, and you may think they will just start to breed. It is not that simple. They have to be fed a very specialised diet, consisting of insectivorous food, minced meat, green food, boiled egg, vitamin powder, bone meal and plenty of live food, like mealworms and locusts.

Incidentally, it is always a sure sign that these plovers are coming into breeding condition when they develop the black tip to the bright red beak. Even when all the conditions are correct, success is not assured, as we have the vagaries of the British weather! Young plovers, although closely brooded by the parent, are very susceptible to the damp and can easily become chilled. Parent birds often nest in the most exposed parts of the aviary and, on several occasions, chicks have needed to be warmed and dried out in the bird kitchen before being returned to their parents.

### Prolific

The Crowned plover is a prolific egg-layer, with as many as four clutches, containing three or four eggs each time. Sometimes we take the eggs away and put them in our incubator, but this means that we have to hand-rear the delicate chicks ourselves. The incubation period is 26 days, and the parents start incubation when the full clutch is laid, so the young all hatch at the same time. The chicks are able to feed themselves very soon after hatching. The parents brood them carefully, show them the food, and are very protective towards them.

### Noisy

It is when they have newly-hatched young that the parents are at their most noisy, giving vent to piping cries if a keeper is spotted, but we have never observed the famous "broken wing" ruse used by our native lapwing and others, to draw danger away from the chicks.

Next time you visit the zoo, it is well worth your while taking a closer look at the pebble-covered aviary floors. You may spot some newly-hatched plover chicks, or see bird behaviour you would normally have to travel thousands of miles to observe!



Jubilee, shown here, is still the only male Asian elephant to be born and reared in the UK

**A** YEAR ago, the North of England Zoological Society hosted the inaugural meeting of the Joint Management of Elephants Group. Chester holds one of only three bull Asian elephants in British zoos, and staff here felt it was vital to begin discussions on the future breeding opportunities for these animals. A second meeting was held at Woburn in October last year and, during both these meetings, it became clear that there were several gaps in our knowledge and understanding of this species, both in the wild and within captive management.

The group had little information about the wild population status, or its likely downward population trend and reasons for this. To put the figures into perspective, the wild Asian elephant population is estimated at 35,000, while the population of the western lowland gorilla is

probably 40,000. Admittedly, the domesticated elephant population stands at 12,500, but few of these animals breed. Captive breeding programmes should be integrated with the management of wild populations. Only in this way can the long-term strategies be fulfilled. Captive programmes may well provide useful information impossible to obtain in the field, as well as the "seed-corn" for the future. Integration provides essential information to impart to both interested and antagonistic bodies.

At the Chiangmai meeting, people managing wild and captive populations had an ideal opportunity to impart and assimilate knowledge and their concerns on the long-term survival of this species. This was the third IUCN Asian Elephant Meeting, and the first where zoological collections were encouraged to attend and

## THAILAND

to contribute—a clear indication of concern about the downward trend of this species in the foreseeable future and the need for successful captive breeding programmes.

Prior to the Chiangmai meeting, delegates were circulated with an *Action Plan for Asian Elephant Conservation—a Country by Country Analysis*, compiled by Dr. Charles Santiapillai, of the World Wildlife Fund, Indonesia. This draft outlined the best estimates of elephant populations, problems of conservation, elephant/man conflicts and put forward strategies to conserve both elephants and habitat, taking the agricultural development needs of each country into account. The table is printed at the end of this article.

Rapid habitat destruction, expanding human populations and agricultural development have all contributed to an increased decline in this species over its vast range. In some areas, poaching is also a serious threat, which has resulted in there being a lack of "tuskers" and an unbalanced sex ratio—as much as 1:20 in some areas. In Ceylon, the constant shooting of tuskers has resulted in an elephant population where only six per cent of the males are tuskers, leading to an artificially-restricted gene pool. It has been documented that tuskless bulls usually breed tuskless offspring.

Agricultural expansion should be better planned to avoid elephant/man conflict and, where this is not possible, selective choice of crops should be made, i.e., avoid the crops such as sugar-cane and young palm-oil palms, which elephants love. Electric fencing and permanent barriers should be costed before a project is undertaken. Without these protective measures, the project will not be viable unless the elephants are removed.

The domesticated elephants—particularly the working animals—have usually been taken from the wild. An elephant is of little value as a working animal until it is at least ten years of age, and the expense of keeping an elephant for ten years has never proved attractive. Working elephants with calves at-heel are less malleable, and also there is a high mortality of calves at-heel during logging operations.

# ELEPHANT CONFERENCE

Captive breeding within established zoos is without doubt now essential. Total known births within the United States since 1886 are 32:19 and, within the past decade, 17:6. The UK boasts one surviving male youngster only—Chester Zoo's Jubilee.

Dr. Michael J. Schmidt presented a paper on Portland Zoo's research programme on artificial insemination, which was first started in 1974. The first aim of this research was directed at utilising the very few bull elephants kept in zoological parks and circuses.

However, with rapidly declining populations, the present domesticated elephant population of 12,500 animals represents a vast and necessary gene pool, which should be utilised for the long-term management of the species.

As yet, artificial insemination has not resulted in a pregnancy, but great advances have been made and much valuable data obtained.

The wild elephant population will inevitably decrease, owing to human population expansion, reduction in habitat and economic growth. These factors will lead to even more man/elephant conflicts, which will result in closely-managed discontinuous populations.

The domesticated elephant will continue to be utilised for tourist and cultural purposes, although its use in forestry will sadly decline as a result of modern machinery and the decreasing forests.

If captive breeding programmes are not promoted by zoos, then the same

*Nick Ellerton, Curator of Mammals, reports on the IUCN Asian Elephant Specialist Group Meeting, which he attended in Chiangmai, Thailand, earlier this year*



Elephants are still used in forestry work in Thailand, but modern machinery is increasingly taking their place

decline will occur within these establishments.

Animals will be available through the results of man/elephant conflicts in the immediate future, but I feel sure that this will lead us to believe that replacement is easier than the cost of providing breeding facilities. This would be very short-sighted.

Chester has an ideal opportunity to become a major contributor to a

captive breeding programme. This would involve a financial commitment and an annual capital expenditure programme for building further facilities within the existing complex.

In the light of the expenditure which will be required, the income from extra visitor attendance must be borne in mind. Baby elephants are financially and conservationally very rewarding.

COUNTRY	HUMAN POPULATION	WILD ELEPHANTS	DOMESTIC ELEPHANTS
Bangladesh	90 million	200	50, not self-sustaining
Bhutan	1.2 million	60, with some movement from India	Nominal
Burma	35 million	3,000+	5,400, not self-sustaining
China	1 billion+	150—migratory	
India	700 million	22,000	2,000+
Kampuchea	8.5 million	2,000	Unknown, possibly 250
Laos	3.6 million	3,000	1,500
Malaysia		800—1,000	
Nepal	16 million	85+—migrant	Nominal
Sri Lanka	15 million	2,500	500
Sumatra	15 million	3,000—4,800	Unknown
Thailand	48 million	1,300—1,700 (60% decline since 1977)	3,500
Vietnam	60 million	1,500—2,000	600

# DISAPPEARING RHINOS



Picture by Sunday Mirror

Peter Wait's subject this issue is one of the world's most endangered animals—the rhinoceros

The largest of the Asian species is the Indian—*Rhinoceros unicornis*. This has a dark grey skin, covered with small scale-like protuberances, and deep folds at the joint, which give an armour-plated appearance.

With a body length of up to 4.25 metres (14 feet), a large specimen can weigh 3.5 tonnes. They too are solitary animals, and will usually tend to run away, rather than face an enemy—which, unfortunately, is usually man. The belief in magical properties in the horn, blood and urine of these animals has been a major cause of their decline.

It is sad that we know so little about the behaviour of the closely-related Javan rhino—*Rhinoceros sondaicus*—which is very similar in appearance but smaller than the Indian. The Javan rhino is literally at the point of extinction, and it is doubtful whether the few survivors in the Ujung-Kulon reserve in Java will be sufficient to sustain the species.

The smallest rhino is the Sumatran—*Didernoceros sumatrensis*. The largest of this species may be about 2.5 metres in length and between 1.2 and 1.4 metres tall. It too lives a solitary life, though males and females occasionally co-habit. Bristle-like hairs are found all over the skin, which is darker in colour than other species. Two horns immediately distinguish it from the other Asiatic rhinos.

The history of the rhinoceroses at Chester goes back to October 1959, when a wild-caught black female was purchased from the dealer John Seago. This was Susie, then estimated as a two-year-old. A pair was formed when a male was obtained

THE five species of rhinoceros are found on two continents. The black and white in Africa, and the Indian, Javan and Sumatran in Asia. All are considered endangered. Despite conservation measures, poaching is still the main threat, and trading in rhinoceros horn still exists, though not to the same extent as in the past.

Of the perissodactyl mammals, only the rhinoceros retains the heavy-bodied structure of the now-extinct prehistoric families in the order. One or two horns feature on the massive heads, and a prehensile upper lip helps them browse. In all rhinos the sense of sight is poor, but scent and hearing is good.

The white, or square-lipped rhinoceros—*Ceratotherium simum*—is the largest land-living animal after the elephant. Usually placid in nature, it is generally greyish in colour but, dependant on the colour of the mud it wallows in, may be anything from grey to reddish-brown.

It is the most sociable and least aggressive of the rhinos, usually seen

in family groups of three or four, and these may join with others in favourable feeding areas.

A single young is born after a gestation of about 16 months. The name "white" does not define colour, but is derived from the Afrikaans word "wiet", meaning "broad", and refers to the broad muzzle of this species. Only about a dozen animals remain of a Northern sub-species.

The smaller black rhinoceros—*Diceros bicornis*—varies between 3.00 and 3.75 metres in length and stands about 1.5 metres tall. The weight of an adult is between 1.00 and 1.75 tonnes. More solitary by nature, the male black rhino is territorial, tending to stay in one area, the boundary of which is marked by dung heaps and by spraying with urine. Although certain females and young may be present, strange rhinos do not appear to be tolerated. It is a little darker in colour than the white rhino, but the most distinguishing feature between the two species is the prehensile upper lip, protruding in the middle. In the white, this is squared.

from Bristol Zoo in March 1960. Roger was the first rhino bred in the UK in August 1958, and stayed in Chester until his death in 1980. Shortly after his arrival, the pair featured in one of the early television broadcasts from the zoo.

Susie and Roger produced three calves. The first was Reginald, in 1967. He went to Moscow in 1970. The second was Jasper, in 1971, who went to Paignton in 1973, came back to Chester in 1981, went to Whip-snade in 1987, and more recently to London, where he is paired with their female, called Linda, born in 1973.

The present pair at Chester are Parky, a male born at Whip-snade in October 1982, and Esther, born in London in May 1982. They came to Chester in May 1984, and we have high hopes that they will be as successful parents as Susie and Roger.

White rhinos were represented when Madageni and Magadive were purchased from the Natal Game and Fish Board for £3,000 in 1962. At this time, the population of white rhinos in the Umfolozi game reserve was increasing, and new homes were being sought for surplus stock. The names were given by their African wardens because of their behaviour at the time of capture. Madageni was the female. Her name means "Stick-in-the-mud". She was about nine years old, and from her appearance it was assumed that she had recently had a calf. The male, Magadive, was four years old on arrival. His name means "Drunk"—but now he is known, more kindly, as "Duggie"! When this pair were offered, the present rhino house did not exist. Quick work by the maintenance department ensured it was ready to house them when they arrived just three months later. Madageni died here in 1984.

The most recent arrival is Yodha, a young male Indian rhinoceros. He was bred at Whip-snade Park and, due to the imminent birth of a brother or sister, we were asked if we could house him. Hopefully, a mate will be found for Yodha, whose name means "Supreme Warrior".

As with other endangered species, rhinoceroses are jointly managed by the country's leading zoos. Regular meetings are held to ensure that these endangered animals get the best available attention and consideration as possible.

# HELP CHESHIRE WILDLIFE FUND

*The interests of the North of England Zoological Society and the Cheshire Conservation Trust have much in common, and we are happy to give the Trust this opportunity of publicising its work*

**T**HE Cheshire Conservation Trust was formed in 1962, making this our Silver Jubilee Year. From small beginnings, with just two reserves and no full-time staff, we have grown to an organisation with four full-time staff and nearly 100 MSC workers on two community programmes. The number of reserves has risen to over 30, spread all across the county. Our work does not stop here though. We still need to buy more reserves, to safeguard our natural heritage and this, unfortunately, needs money. As a charity, the Trust relies on donations, subscriptions and grants for its income to carry out its work. Fund-raising for the Trust is carried out by their Cheshire Wildlife Appeal.

The Cheshire Wildlife Appeal was officially launched in April 1987. One of the aims of the appeal is to raise money for the acquisition of natural reserves to conserve Cheshire's vanishing countryside. Money raised will be used not only on the management of the new reserves, but also on the existing reserves.

The appeal target is £675,000, and the money is to be spent on meres and marshes, meadows and mosslands, moors and woodlands. To date, we have been able to secure an excellent meadow at Swettenham. This reserve has a splendid show of wild flowers in the spring, and the brook and associated woodland provide feeding and nesting areas for many species of birds.

Money for the appeal has been raised by company sponsorship and donations, donations from individuals and money from fund-raising events.

Recently, a local schoolgirl—Nathalie Seddon—donated £250 to the Duke of Westminster for the Cheshire Wildlife Appeal. This was money she won when she came fourth in the European Year of the Environment Eyecatcher Competition.

Each amount raised, no matter how small or large, is welcomed and put into use to help us reach our objectives.

## How You Can Help

For further information on how you can help the Cheshire Conservation Trust and the Cheshire Wildlife Appeal, write to Paul Hill (Development Officer), Cheshire Conservation Trust, Marbury Country Park, Northwich CW9 6AT; Tel: 0606 781868.



Nathalie Seddon presents her prize-winning cheque to the Duke of Westminster

# PHOTOGRAPHIC COMPETITION

## Stage One

**T**HE competition to find the Chester Zoo Photographer of 1988 is attracting hundreds of entries from all over the country.

This year, the competition is divided into three stages. Judging for Stage One—all entries received by end of June—took place on 12th July. The judge was Mike Rose, Marketing Director of Fishwicks of Haydock, who confessed to being impressed at the high standard of many of the entries. "I have judged many competitions all over the country, and the photographs here compare very favourably with the best of them," he said.

All the entries for Stages One and Two—which closed on 31st August—will go forward for inclusion in the third and final stage. All entries must be in by the closing date, 31st October. The overall winner will receive a 35AF2 camera—Kodak's top of the range. There are other cameras and photographic vouchers still to be won. So get clicking!



This powerful photograph of a puma was the judge's choice for first prize in the print section. It was taken by Mr. G. Bourne of Hanley, Stoke-on-Trent. The slide section winner (not shown) was Graham Land of Llandudno



This lovely picture of a chimpanzee on the island won the Junior Section prize for ten-year-old Andrew Lowe, of St. Helens



Not a prize-winner in the first stage—but still eligible for future stages—is this appealing photograph of a Talapoin monkey, taken by Mr. S. Burrows of Wrexham

# BARN OWL RELEASE PROJECT

Dr. Roger Wilkinson  
Curator of Birds

**B**ARN Owls normally have clutches of five, but can have up to nine eggs, and are capable of breeding several times in the same season. In the wild, second broods are comparatively rare and, on average, Barn Owls may be expected to fledge three chicks each season. That, however, appears to be too few to maintain the population in many parts of England, where a serious decline in numbers has occurred in the last 50 years.

This decline has been documented in a recent analysis by Colin Shawyer, published by the Hawk Trust. In 1932, some 239 pairs of Barn Owls were estimated in Cheshire. A recent survey over the years 1982 to 1985 shows this Cheshire population to have declined to a critical level of only 33 pairs. Mortality peaks occur in October/November and again in February/March. The autumn losses are predominantly of birds of the year, but in late winter include a higher proportion of adults. Snow cover appears to be a major factor, limiting the ability of Barn Owls to hunt sufficient voles to survive, and it is in the more northerly upland parts of Great Britain that their populations have most severely declined.

## Decline

A major factor in the decline is believed to be changes towards winters with greater numbers of days of snow cover in the last 50 years. Other factors suggested for the decline—and these must be additive—are changes in land use, an increased loss of nesting sites, increased use of pesticides, and increasing traffic on our roads. A staggering 50 per cent of reported deaths of Barn Owls result from collisions with motor vehicles. Other causes include drowning—especially in water-butts—and collisions with overhead power-lines.

In selecting release sites for our captive-bred Barn Owls, all these causes of mortality need to be taken into account. Thus, an ideal site would be low altitude, and away from major roads and power-lines. It should also have suitable nesting sites in old buildings or trees, and support a good population of accessible voles or other rodents. The careful selection of release sites has been the work of Carole and Paul Hackney. They have co-ordinated the efforts of many people in attempting to reintroduce Barn Owls to different areas of Cheshire, the Wirral and Staffordshire, and they won a Royal Society for Nature Conservation award for this work in 1986.



One of Chester Zoo's Barn Owl chicks, hatched in July this year

Chester Zoo has held and bred Barn Owls for many years, but hybridisation with the African race *Tyto alba affinis* had made our previous stock unsuitable for release purposes. These were therefore sent to an aviculturist interested in propagating this sub-species, and new birds of English origin were obtained. Two birds, which had both been presented to us by London Zoo in October 1985, turned out to be females, and males were then sought for these. Initially, we contacted Tony Warburton, who had initiated a Barn Owl breeding and release scheme in Cumbria, but he was unable to help us directly. However, Malcolm Ingham, of Wirral Country Park, put us in touch with Carole Hackney, who—luckily—had two unpaired males. These arrived on breeding loan at Chester in March 1986, and quickly settled down to breed and to begin our association with the Hackneys' release projects.



A total of nine birds were bred at Chester in 1986, and released in Cheshire for the Hackneys, and on the Wirral by Malcolm Ingham. In 1987, our Barn Owls were especially productive, and 18 birds were released into the wild. At the time of writing, nine young owls have already been taken for release this year, and a further eight are presently in the nest.

Barn Owls are taken from the nest while still chicks, at the age of five/six weeks, and fitted with BTO metal rings. This is essential so that the subsequent fate of these owlets can be monitored. The chicks are then held at the release site, often in a nest-box in the loft of a barn, and fed dead day-old chicks until they become independent. Once the owls are clearly hunting for themselves (as can be deduced from a careful examination of bones and fur in their pellets), then the supply of day-old chicks is gradually reduced. Alternatively, a pair of older owls may be held and fed in a large barn over winter, allowed to breed, and then, when large young are in the nest, be permitted their freedom. The pull of the hungry youngsters then ensures that the parents return to the nest site, which then, hopefully, they may use in subsequent years.

It is very difficult to be certain of the fate of many of the owlets released in the last few years. Certainly owls are still being seen at sites where they were released in earlier years. As yet, we have no positive evidence that any of the Chester birds are now breeding in the wild. A recent initiative by the British Trust for Ornithology is the setting-up of regional projects to monitor the status and breeding of Barn Owls. This initiative is particularly welcomed, as only with hard information on the fate of our owlets can we really know the success or demise of our joint venture.

# JU NEWS

## JUNIOR MEMBERS' BAZAAR

*Many thanks to all Junior Members who helped make the bazaar such a success. You raised the magnificent sum of £400 for the chimp house fund*



Nicholas Smith, from Thornton Heath; Matthew Cappaert, from Ellesmere Port; and Geoff Guy, from Ormskirk did very buoyant business with helium balloons!



What's under the yoghurt pots? Only nine-year-old Elizabeth Adams and 13-year-old Christine Ashley know the answer!



Council Member Brian Livingstone gets a little help from Chairman's son Nick Thomson, as he barbecues the sausages



*Below:* Junior Members' Club Secretary Penny Rudd concentrates on the task of turning four-year-old Gemma Greaves from Rochdale into a tiger



Two-year-old Louise Cousins, from Sealand, had no problems smashing plates—especially after elephant keeper Neil Spooner allowed her to get much closer than the throwing-line!



# Junior Members' Field Trips & Meetings



## VISIT TO A TROUT FARM

Saturday, 24th September, 1988

This trip was originally planned for earlier in 1988, but unfortunately had to be delayed, owing to building works at the trout farm. Juniors have been invited back by the Welsh Water Authority during September, to learn something about the fish which live in our lakes and rivers. The bus will leave the staff car park at 10.00 a.m., returning around 3.30/4.00 p.m. **Over-tens are invited.**

## DEER RUT AT TATTON PARK

Saturday, 22nd October, 1988

Many of you will know that Tatton Park, near Knutsford, has a large collection of red deer and fallow deer. During October, the "rut" takes place, when the stags come into breeding condition, and it is fascinating to watch the stags compete for the hinds. We will spend the morning at the Home Farm and then, after a picnic lunch, go out into the Deer Park. The bus will leave the staff car park at 10.00 a.m., returning around 4.00 p.m. **Over-eights.**

## MARTIN MERE— THE WILDFOWL TRUST

Saturday, 19th November, 1988

November is a great time to visit the Wildfowl Trust, because it is when many of the migratory geese and swans have flown in for their annual visit. Huge numbers of birds can be seen from the special "hides". We will leave the zoo at 9.30 a.m., returning around 4.30 p.m. **Over-eights are welcome to join us.**

## THE CHRISTMAS PARTY

Saturday, 10th December, 1988

The year would not be quite the same without our annual "bash" at Christmas. We will have party games and a disco, and this will be held in the Oakfield, as usual. Everyone welcome. We will meet at 7.00 p.m. and end around 10.00 p.m.

## THE CONTACT SESSION

Saturday, 28th January, 1989 (please note date change from last issue)

An opportunity to meet some of our friendlier residents, such as tarantulas, snakes, rats, locusts, chicks, and perhaps one or two other surprises! Obviously, there are not too many animals in the zoo which like to meet people at close quarters, but we will see what turns up. We will meet outside the Oakfield at 2.00 p.m., ending around 4.00 p.m. **Over eights are invited.**



## THE JUNIOR MEMBERS' CONFERENCE DAY

Saturday, 25th February, 1989 (please note date change from last issue)

This is nothing like as formal as it sounds, folks! It is just a chance for you all to get together and give us your ideas for the Club, such as where you would like to go during the year, and what you would like to do for events within the zoo. During the morning we will have a conducted tour around the zoo and, after lunch, we will head for the Lecture Hall, where we will have some slides perhaps. Or—even better—we are hoping to get a celebrity speaker to come and talk about animals. Keep an eye on the magazine for details. We will meet outside the Oakfield at 11.00 a.m., ending around 4.00 p.m. **Everyone welcome.**

## TRACKS AND SIGNS

Saturday, 8th April, 1989

One of our most popular trips which has been requested again this year. We spend our day visiting various enclosures, and finding good footprints from which to take plaster casts. We usually manage to find lots, and these are raffled off at the end of the day. Unfortunately, we never quite make enough for everyone to take one home, but we keep trying! We will meet outside the Oakfield at 11.00 a.m., finishing around 4.00 p.m. **Over-eights are invited to take part.** Wellies essential.

## HILBRE ISLAND

Date to be confirmed according to tide time-table

We hope to visit Hilbre during May, to see some of the seals and birds which come into the Dee Estuary. We wait for low tide, walk across to the island and wait there for the tide to surround us; then, when it goes out again, we walk back! It is a fairly strenuous walk, and therefore **over-tens will be invited to join in.** Wellies essential.

## DAY WITH THE KEEPER

Saturday, 24th June, 1989

Each year, some of the older juniors are invited to spend a day working with the keepers. This is a particularly good opportunity to learn something about the job of a keeper, and is also your chance to see some of the "behind-the-scenes" workings of the zoo. Regrettably, we have to limit this event to **over-12s only.** We will meet outside the Oakfield at 10.30 a.m., and finish around 4.00 p.m.

## FOSSIL-HUNTING EXPEDITION

Saturday, 22nd July, 1989

For the last few years we have been visiting a quarry in Derbyshire, but we thought we would visit the limestone quarries of Shropshire. Fossil-hunting is enormous fun, and this should be a good day. **Over-tens are invited** to join us, and we will be leaving the staff car park at 9.30 a.m., returning about 5.00 p.m.

## PLEASE NOTE

Booking must be made for **all** events. Please ring Penny at the zoo **not more** than two weeks before an event if you would like to attend. Places are allocated on a first-come/first-served basis, and may be limited.

For those trips which involve either a bus trip or the provision of food or materials, a charge will have to be made in order for us to cover basic costs. This will be collected on the day, and will vary according to the distance travelled and food/materials provided.

This list is provisional and, in exceptional circumstances, we may have to alter the dates and times of some of the trips, so please keep an eye on the listing in the magazine, and keep up-to-date.



# Arrivals Births and Hatchings

**FROM 1st MAY TO 31st JULY, 1988**

## Mammals

0.0.1	Rodrigues Fruit Bat ( <i>Pteropus rodricensis</i> )	Born
0.0.2	Ring-tailed Lemur ( <i>Lemur catta</i> )	Born
0.0.1	Cotton-topped Tamarin ( <i>Saguinus oedipus</i> )	Born
1.0	De Brazza Monkey ( <i>Cercopithecus neglectus</i> )	Exchanged
0.0.2	Talapoin Monkey ( <i>Cercopithecus talapoin</i> )	Born
0.1	Chimpanzee ( <i>Pan troglodytes</i> )	Born
1.0	Orang Utan ( <i>Pongo p. pygmaeus</i> )	Received
0.0.3	Coati ( <i>Nasua nasua</i> )	Born
0.0.7	Meerkat ( <i>Suricata suricatta</i> )	Born
1.0	Ocelot ( <i>Felis pardalis</i> )	Received
0.0.2	Jungle Cat ( <i>Felis chaus</i> )	Born
0.0.3	Scottish Wildcat ( <i>Felis sylvestris grampia</i> )	Born
1.0	Przewalski Horse ( <i>Equus przewalskii</i> )	Born
0.0.1	Collared Peccary ( <i>Tayassu tajacu</i> )	Born
1.0	Wapiti ( <i>Cervus canadensis</i> )	Born
2.1	Reindeer ( <i>Rangifer tarandus</i> )	Born
1.0.2	Nilgai ( <i>Boselaphus tragocamelus</i> )	Born
0.0.2	White-bearded Gnu ( <i>Connochaetes taurinus</i> )	Born
0.4	Red Lechwe ( <i>Kobus leche</i> )	Born
2.2	Bison ( <i>Bison bison</i> )	Born
1.0	Ankole Cattle ( <i>Bos taurus</i> )	Born
0.1	Arabian Gazelle ( <i>Gazella arabica</i> )	Born

## Birds

0.0.7	Chilean Tinamou ( <i>Nothoprocta perdicaria</i> )	Hatched
0.0.3	Waldrapp Ibis ( <i>Geronticus eremita</i> )	Hatched
0.0.6	Ruddy-headed Goose ( <i>Chloephaga rubidiceps</i> )	Hatched
0.0.11	Common Shelduck ( <i>Tadorna tadorna</i> )	Hatched
0.0.3	Red-crested Pochard ( <i>Netta rufina</i> )	Hatched
0.0.3	White-faced Tree Duck ( <i>Dendrocygna viduata</i> )	Hatched
0.0.5	Fulvous Tree Duck ( <i>Dendrocygna bicolor</i> )	Hatched
0.0.3	Shoveller ( <i>Anas clypeata</i> )	Hatched
0.0.1	Rosy-billed Pochard ( <i>Netta peposaca</i> )	Hatched
0.0.2	Marbled Teal ( <i>Anas angustirostris</i> )	Hatched
0.0.1	Hooded Merganser ( <i>Mergus cucullatus</i> )	Hatched
0.0.18	Mandarin Duck ( <i>Aix galericulata</i> )	Hatched
0.0.8	Humboldt's Penguin ( <i>Spheniscus humboldti</i> )	Hatched
0.0.5	Golden Pheasant ( <i>Chrysolophus pictus</i> )	Hatched
0.0.2	White-eared Pheasant ( <i>Crossoptilon crossoptilon</i> )	Hatched
1.0	White-eared Pheasant	Received
0.0.1	Grey Peacock Pheasant ( <i>Polyplectron bicalcaratum</i> )	Hatched
0.0.5	Common Peafowl ( <i>Pavo cristatus</i> )	Hatched
0.0.1	Satyr Tragopan ( <i>Tragopan satyra</i> )	Hatched
0.0.7	Roul-roul Partridge ( <i>Rollulus roul roul</i> )	Hatched
0.0.8	Blacksmith Plover ( <i>Vanellus armatus</i> )	Hatched
0.0.2	Crowned Plover ( <i>Vanellus coronatus</i> )	Hatched
0.0.2	Bar-tailed Cuckoo Dove ( <i>Macropygia unchall</i> )	Hatched
0.0.4	Mountain Witch Dove ( <i>Geotrygon versicolor</i> )	Hatched
0.0.23	Barn Owl ( <i>Tyto alba</i> )	Hatched
0.0.3	Great Eagle Owl ( <i>Bubo bubo</i> )	Hatched
0.0.1	Great Horned Owl ( <i>Bubo virginianus</i> )	Hatched
0.0.2	Spectacled Owl ( <i>Pulsatrix perspicillata</i> )	Hatched
0.0.7	Snowy Owl ( <i>Nyctea scandiaca</i> )	Hatched

0.0.2	Blue and Gold Macaw ( <i>Ara ararauna</i> )	Hatched
0.0.2	Patagonian Conure ( <i>Cyanoliseus patagonus</i> )	Hatched
1.0	Channel-billed Toucan ( <i>Ramphastos vitellinus</i> )	Received
0.0.6	Kookaburra ( <i>Dacelo novaeguineae</i> )	Hatched
0.0.7	Bare-faced Curassow ( <i>Crax fasciolata sclateri</i> )	Hatched
1.1	Collared Aracari ( <i>Pteroglossus leucogaster</i> )	Received
0.0.1	Variable Chacalaca ( <i>Ortalis motmot</i> )	Hatched
0.0.5	White Woodpecker ( <i>Leuconerpes candidus</i> )	Hatched
0.0.1	Red-backed Mousebird ( <i>Colius castonotus</i> )	Hatched
0.0.1	Red-eared Bulbul ( <i>Pycnonotus jocosus</i> )	Hatched
0.0.2	Mexican Housefinch ( <i>Carpodacus mexicanus</i> )	Hatched
0.0.6	Rothschild's Mynah ( <i>Leucopsar rothschildi</i> )	Hatched
0.2	Rothschild's Mynah	Received
0.0.8	Spreo Starling ( <i>Spreo superbus</i> )	Hatched
1.1	Royal Starling ( <i>Cosmopsarus regius</i> )	Received
1.1	Amethyst Starling ( <i>Cinnyricinclus leucogaster</i> )	Received
0.0.3	San Blas Jay ( <i>Cissilopha sanblasiana</i> )	Hatched
0.0.5	White-winged Wood Duck ( <i>Cairina scutulata</i> )	Hatched
0.0.1	Red-masked Conure ( <i>Aratinga erythrogenys</i> )	Hatched
0.0.1	Night Heron ( <i>Nycticorax nycticorax</i> )	Hatched
0.0.6	Ruddy Duck ( <i>Oxyura jamaicensis</i> )	Hatched
0.0.4	Grey Hornbill ( <i>Tockus nasutus</i> )	Hatched
0.0.3	Caribbean Flamingo ( <i>Phoenicopterus ruber</i> )	Hatched
0.0.2	Red-breasted Goose ( <i>Branta ruficollis</i> )	Hatched
0.0.2	Sarus Crane ( <i>Grus antigone</i> )	Hatched
2.2	Stella's Lorikeet ( <i>Charmosyna papou stellae</i> )	Received

## Reptiles

2.2	Greek Tortoise ( <i>Testudo graeca</i> )	Presented
0.0.9	Leopard Gecko ( <i>Eublepharis macularius</i> )	Hatched
0.0.2	Common Iguana ( <i>Iguana iguana</i> )	Presented
0.0.2	Spiny Iguana ( <i>Ctenosaura sp.</i> )	Presented
0.0.3	Thailand Water Dragon ( <i>Physignathus cocincinus</i> )	Presented
0.0.1	Salvator Monitor ( <i>Varanus salvator</i> )	Presented
0.3	Plumed Basilisk ( <i>Basiliscus plumifrons</i> )	Received
0.0.2	Prehensile-tailed Skink ( <i>Corucia zebrata</i> )	Hatched
0.1	Indian Python ( <i>Python molurus bivittatus</i> )	Presented
1.2	Rainbow Boa ( <i>Epicrates cenchris maura</i> )	Received
0.0.17	Madagascan Tree Boa ( <i>Sanzinia madagascariensis</i> )	Born
0.0.7	White-lipped Tree Viper ( <i>Trimeresurus albolabris</i> )	Born

## Aquarium

0.0.1	African Lung Fish ( <i>Protopterus annectens</i> )	Purchased
?.?.?	Dwarf Seahorse ( <i>Hippocampus zosterae</i> )	Bred

Key: 1.0=one male; 0.1=one female; 0.0.1=one of undetermined sex