

LIFE

THE NORTH WEST ENGLAND ZOOLOGICAL SOCIETY
ZOOLOGICAL GARDENS
NESTON, CHESTER

ZOOLOGICAL GARDENS



CHESTER

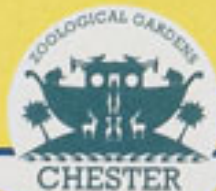
Zoo Life



Summer 1997

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Chez Nous



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 Editor: Pat Cade

Spring forward to Summer!

SPRING brings an extra vigour to the Zoo. The gardens are especially glorious, with hosts of golden daffodils brightening up the grassy banks. Every leafy pathway is filled with birdsong and flanked by fresh new blossoms in delicate shades. Antelopes, deer and other hoofstock that have overwintered on hard standings, are released on to large grassy paddocks verdant with the first flush of growth.

It is inspiring to watch herds of Nilgai, Axis Deer and Blackbuck wheeling around in the vastness of the Asian Plains enclosure. We see Ring-tailed Lemurs frolicking on their island and lying back to catch the warming rays of the sun.

Everywhere there is breeding activity and the joy and charm of newborn baby animals – Zebra, Père David's Deer, Bison, Fruit Bats, Penguins, Red-crowned Crane and many others! On sunny days the Sand Lizards can be seen emerging from hibernation in their burrows in the outside enclosure (watch carefully!).

We also have healthy juvenile Sand Lizards from last year's hatchings and these will be placed out on the dunes as we progress into summer.

The Aquarium celebrates another success story with the breeding of twelve Banggai Cardinal fish, an uncommon and particularly beautiful tropical marine species. These hatched from eggs taken after two weeks' incubation with the male and one week's artificial incubation.

Through this technique, this is the first recorded success with Banggai Cardinals. Congratulations on breeding success are also due to Jubilee Chef Ian Patten and his wife Sara. Ian became a Dad on Good Friday when a bouncing baby boy called Nathan was produced!

New projects

The new visitor season brought with it a flurry of exciting new projects. Maned Wolves have been installed in a freshly redeveloped enclosure adjacent to the



new Condor Cliffs aviary. These wonderful carnivores from South America have a very distinct aroma and look rather like a 'fox on stilts'! They are fairly mild mannered and in nature feed mainly on small rodents, insects and some vegetable matter (see page 18).

A magnificent waterfowl hide has been erected in West Zoo and educational interpretation is now being installed. The hide, which provides a super view of Pelicans and waterfowl, was officially opened on behalf of the Ronald Pryor Charity which very kindly donated money for its construction.

Supermarket chain Kwik Save have generously agreed to sponsor redevelopment of the Children's Farm: plans have been drawn up and work will shortly commence.

The Alligator Pool in the Tropical Realm display is to be extended in the area under the newly installed Aztec Temple. The Temple development, which relates to ancient human civilisations of the rainforest, is already generating a lot of excitement and interest among our visitors, both young and old. (See picture on page 5).

Work on the magnificent new Monkey Islands project progresses with renewed vigour. All of the islands are now fully sculpted and the plantings on them are near complete, anticipating a grand opening in high summer. Once complete, this will be the largest monkey facility of its kind anywhere.

Library move

The Education Division is undergoing a dramatic transformation under its new supremo Stephen McKeown. There has been a radical reorganisation of all areas to greatly increase the space for activities with visiting schoolchildren.

There are improved workspaces for staff and volunteers and the entire Zoo Library has been relocated in the education area. It makes far more sense for the public and staff to have access to the library in a place where there are more people on hand to assist with its operation.

Under Lynn Wilkinson, the library has developed as a wonderful zoological resource. In its new location we can anticipate continued beneficial development incorporating information

technology and far more use of the library, particularly by our younger visitors.

The spirit of renewal has extended to the Director's Office which has been repainted and had a general Spring clean. The office has been reorganised with a new door being formed to link up with Julie, my personal assistant. With all the plastic sheeting and dust around, rumours were rife that there was an archaeological dig in progress!

Wonderful Easter!

The first big test of the new season came with the Easter Bank Holiday. This is always a slightly anxious time - particularly if the weekend is set early in the year, thus increasing the risk that bad weather could put off the visitors. It turned out that we had nothing to fear.

The weather was glorious and more than 51,000 people came to the zoo over the four days, with cars being parked every three seconds!

The staff pulled out all the stops to make them welcome and we had reassuringly good takings from the gate, shops and catering outlets.

All of this sets us on target for another good year's trading with our surpluses being channelled back into worthwhile animal projects.

STOP PRESS

Elephant Calf KARHA

Just as this magazine was going on the presses, we had the sad news that Karha, our 17 month old elephant calf, had died. We were all devastated at the loss of this wonderful young animal. I am immensely grateful to the keeping staff for their skill, dedication and hard work in raising Karha, and for their round-the-clock vigil during her last few days.

The centre pages carry the story of her recent successful operation and we felt that members would still be interested in reading this. It is a tribute to the veterinary team from Lavister and the staff from Leaburst Veterinary Field Station. I would like to publicly acknowledge my immense gratitude to everyone involved.

I would also say that the zoo remains resolved to support its longstanding programme for elephant conservation and breeding. The four pregnant elephants that we presently hold at Chester Zoo give us good reason to be hopeful for the future.

Gordon McGregor Reid

◆ *Front cover: 'The Year of the Reef.' One of the photographs brought back from Cameroon by Justin Bell, on his diving expedition - see pages 16 & 17. Photograph courtesy Allan James.*

MEMBERS' MEETINGS

1997/98

Saturday 7 June '97 - 2.30 pm in the Lecture Hall. Annual General Meeting of the North of England Zoological Society.

Saturday 11 October '97 - 2.30 pm in the Lecture Hall. Brian Ford - 'Recreating the Dawn of Zoological Microscopy'.

Saturday 8 November '97 - 2.30 pm in the Lecture Hall. Derek Lyon - 'A Year in the Life of a Zoo Vet.' Derek's talks on his work at Chester Zoo are always very popular!

Saturday 13 December '97 - 2.30 pm in the Lecture Hall. Steve McKeown - 'Mokwepa and the Lightning Lizard'. Chester Zoo's Head of Education Division talks about Education with Animals.

Saturday 10 January '98 - 2.30 pm in the Lecture Hall. Tony Ord - 'Pandas and the Mountains of Sichuan.'

February Meeting - not yet arranged.

Saturday 14 March '98 - 2.30 pm in the Lecture Hall. Nick Ellerton, Curator of Mammals - 'Can we afford to love our animals to death?' Managing for the future, and why we have to move some of our favourite animals - are we right or wrong?

April Meeting - not yet arranged.

AGM - date not yet confirmed.

LECTURE HALL ACCESS

As there is now a walkway from the lecture hall to the zoo main entrance, we will no longer have a member of staff manning the old wicket gate entrance into the zoo for members' meetings. Members walking through the zoo before attending lectures should please use the main exit gate.

SAD NEWS

At the end of April, zoo staff were deeply saddened to learn of the death of Doreen Farnell, a key member of the Accounts Department for almost 24 years. We send our sympathy to Doreen's husband, Barrie and her family. In the same week, we received the sad news that Derrick Thompson had died. Although he had officially retired from the zoo several years ago, Derrick continued to offer his computer skills to staff on a voluntary basis. His expertise, patience and good humour will be greatly missed. Derrick's widow, Ivy, is a very active member of the zoo's volunteer group, and our thoughts are with her.

BIRDKEEPING SEMINAR '97'

4 October 1997 at the Midlands Electricity Sports and Social Club, Victoria Road, Fenton, Stoke-on-Trent
Price, including refreshments and lunch - £10



◆ Lilacine Amazon

Zoo Member David Bridgeford is organising this full day seminar, in association with the North Staffs Foreign Bird and Parrot Society. Topics covered will include the work of the National Council for

Aviculture; band rearing and incubation; avian nutrition; Touracos and breeding programmes for endangered species in zoos. There will also be a question and answer session, with the five speakers - all specialist aviculturists. The speakers are Brian Hughes, of the NCA; Richard Hughes, Haven Hand Rearing Services; Malcolm Green, the Birdcare Company; Nigel Hewston, International Touraco Society and Roger Wilkinson, Curator of Birds, Chester Zoo.

Any profits from the seminar will be shared between Chester Zoo and the World Parrot Trust.

Places are limited, and anyone interested should write to David Bridgeford - stamped addressed envelope please - at 19 Wetley Ave., Cellarhead, Stoke-on-Trent, Staffs ST9 0HY.

Telephone 01782 550135.

CHESTER ZOO

Winning names from recent draws:

February:	Dr. D. Cooke	£100
	Mrs M. Brocklebank	£100
	Mrs L. Taylor	£50
	Mrs K. Cranfield	£50
	Mrs B. Phoenix	£50
March:	Miss M. Hurlston	£100
	Mr A. Carr	£100
	Mr R. Morrison	£50
	Mrs O. Griffiths	£50
	Mr E. Wynne	£50
April:	Mrs J. Byrne	£100
	Mrs L. Parsons	£100
	Mrs S. Hall	£50
	Mrs M. Doogan	£50
	Mrs E. Tozer	£50

If you would like the chance to win a useful cash prize, membership of the One Hundred Club is only £5.00 per month. Half the money raised is returned in prizes, and half goes to the zoo. Please contact Alan Sykes at the zoo for more details.

ZOO REVIEW

Chester Zoo PHOTOGRAPHIC COMPETITION



Get snapping for the chance to win one of our great prizes!

The entry forms for this year's competition are now available in the zoo.

As usual, the competition is open to amateur photographers only, and all photographs must be taken in the zoo during 1997.

The top print photographer will win a high performance UC2000 8 mm Canon Camcorder, with auto focus, 15 x zoom and five programme modes. Canon –

who have sponsored the competition for several years – are also providing the prize for our Junior Photographer of the Year – a 'Snowy Owl' AF7 auto-focus camera kit, complete with case, film, battery and photo album.

Crewe Camera Exchange are providing very generous vouchers to spend in any of their branches, and there are also

vouchers from Ness Photo Laboratory and KJP Hargreaves of Liverpool.

The runners-up in the print and slide sections will be taking a short break to Ireland, courtesy of Stena Line Holidays. The company is offering two prizes of a ferry crossing for a car plus one night in bed and breakfast accommodation for two people. Top photographer in the Garden Section will win the



Bridgmere Garden World Trophy, and voucher to spend at this huge garden centre.

The runner-up will win an overnight stay, with breakfast and evening meal for two people at the luxurious Bromborough Village Hotel – including use of their superb leisure facilities and large swimming pool.

There is a maximum of six entries per person. Closing date is 31 October 1997, but every month there will be prizes of Kodak film and zoo family tickets to entries of special merit. So enter early – you might win twice!



New Cross Stitch Designs

Sara Ruks in the Education Division has been busy again at home with her computer, Aida fabric and threads, and has come up with three new bird designs for cross stitch enthusiasts. They are of Penguins, Barn Owls and Scarlet Macaws.

The designs are worked on 14 count Aida. Each kit contains the Aida, threads, needle, chart and full instructions, together with information on the birds and the zoo's involvement in breeding these endangered species.

The Barn Owl and Penguin kits are on sale in the 'Things to Do' shop, and the Ark shop at £6.99 each. The Macaw kit will be ready shortly.

GOODBYE TO LARRY AND JOE



The Estates Division lost two long-serving staff in April, when both Larry Shepherd and Joe Parry retired. Larry has been the zoo's blacksmith for an amazing 33 years, and Joe has been a member of the maintenance team since 1982.

They are photographed, above, with the Director, Dr Gordon Reid, at a farewell presentation.

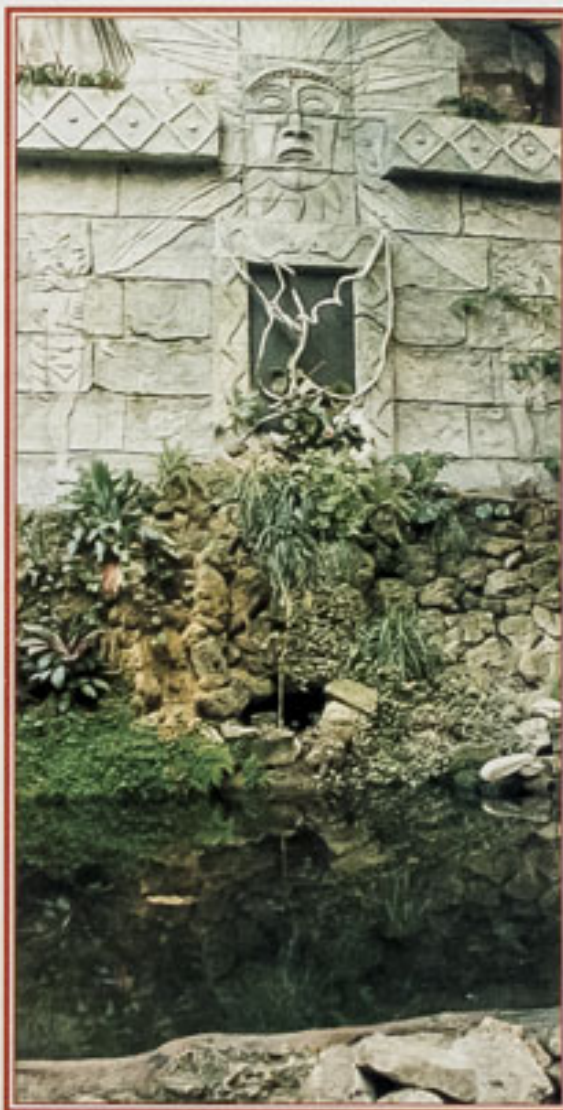
Meet our new Personnel Manager



Mrs Jayne Quinn – shown introducing herself to one of the Children's Farm goats – has been appointed as the zoo's new Personnel Manager. She took up the post at Easter, following 15 years as Human Resources Manager at Royal Sun Alliance in Manchester.

Jayne commented that she was delighted to be working in such a lovely environment, after so many years in a city centre office!

Aztec Temple



Have you noticed the new 'Aztec Temple' in the Tropical Realm? It looks like an ancient sculpture – but is actually very cleverly constructed from a sophisticated type of papier maché! More will be added during the summer months.

RARE FISH

The zoo's aquarium has taken delivery of some very rare, livebearing Golden Saw-finned Goodeids - *Skiffia francesae*. This fish was found in the head-waters of the Rio Teuchitlan in Mexico, but has been extinct in the wild for over a decade now.

A small population has been kept at the Belle Isle Aquarium, Detroit, and from these a group of nearly 40 specimens have been brought to the UK, and shared between the Bolton Museum Aquarium and Chester Zoo. This species, along with two other Goodeid species which the aquarium holds – the Butterfly Goodeid and the Crescent Zoe – are excellent candidates for a reintroduction attempt in the future (see page 8).

Another success story from our small but conservationally very important aquarium, is the breeding of 12 Banggai Cardinal fish, which hatched from eggs taken after two weeks' incubation with the male and one week artificial incubation. This is the first recorded success with this marine fish by artificial incubation.

KEEP THOSE CARTRIDGES COMING!

Thanks to everyone who has taken the trouble to donate used ink jet and laser toner cartridges and used postage stamps to raise funds for the new Elephant House facilities. The response has been excellent - and the appeal continues.

Additionally, used phone cards and foreign currencies (left over change from foreign holidays) can also be used to raise funds, and these items may also be left in the elephant house.

If you have any queries, or wish to arrange collection, please contact Debbie or David Wall on 01270 628289, or write to them at 85 Birch Lane, Nantwich, Cheshire CW5 6JZ.

Another Anoa?



One of the pair of Lowland Anoa, showing his appreciation of the newly installed pool in his enclosure. The Anoa is a miniature Water Buffalo – almost deer like. They are confined to the swampy lowland forests of Northern Sulawesi. At the moment, there are just two males in the zoo, but we hope to have a female in the future.

CLOSE CONTACT

Plans are in progress to establish a small 'hands-on' animal facility in the Education Centre. This will be used for school parties in teaching topics such as classification and animal senses. It is also hope to organise animal close-contact sessions for visitors.

It's your Wild Life - Save it!

That's the slogan for a new fund raising campaign by members of the Zoo Federation. Last year, Federation Zoos across the country raised large sums of money for tiger conservation. This year, it was decided to concentrate on our own native species. Many of these - like the red squirrel and the natterjack toad - need the support of conservation programmes just as much as the more high profile, exotic species.

The aim of the campaign is to increase awareness of the importance of native wildlife. The campaign was launched at the end of May, to coincide with the school half-term holiday. It will continue throughout the summer. Look out for a range of 'native species' items in the gift shop. A percentage from the sales of these goods will go towards the campaign.



▲ *Red Squirrel*

Although visitors enjoy seeing the huge water-fowl lake in the zoo, many people don't appreciate the rarity and conservational value of many of the birds.

To help highlight this, a new hide has been built, to enable visitors a closer look, without being seen by the birds. There are lots of interpretation panels inside the hide, to help identify the various birds, and provide information.

The new building has been financed by a generous donation from the Ronald and Kathleen Pryor Trust. The late Ronald Pryor was a life-time supporter of the zoo, and a Vice Chairman of the Zoo Council. The Trust makes regular donations to the zoo.

The hide was formally opened by Mr Derek Grayson, one of three Trustees of the charity, with his wife, Angela.



▲ *Angela and Derek Grayson admire . . . the view from the hide.*

Kara adopts Karha!

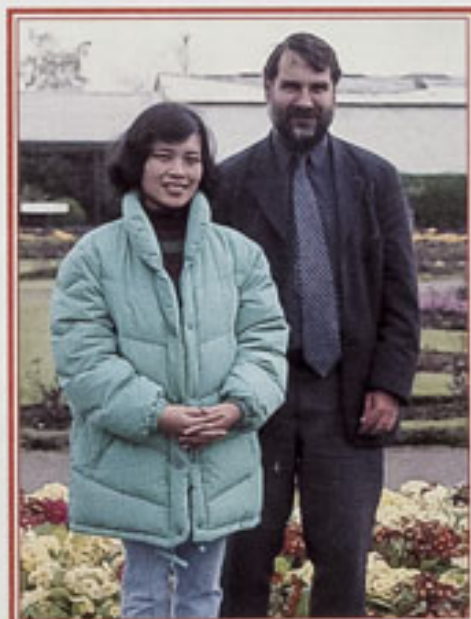


The Kara Foods company, who are major suppliers to the zoo, are delighted to adopt their close-namesake, Karha the elephant calf! Our picture shows Gordon Twigg, Sales Director, (left) trying to tempt Karha with a plate of buns. Senior Keeper Mick Jones and Kara Managing Director, Bill Richards join the party.

VISITOR FROM HANOI

Chester Zoo frequently welcomes staff from other zoos across the world.

A recent visitor was Ms Cuc Phuong, Technical Director of Hanoi Zoo, seen here with Curator of Birds, Dr Roger Wilkinson.



Bird's Eye View



▲ Watch out for cactus spines in the water! Gordon samples pools at San Jose – a habitat suffering from the introduction of European Carp.

THERE is life, activity, colour, smell, vibrant sounds and excitement in Mexico City! This, coupled with its rich history and impressive architecture, made it a fascinating and stimulating place to visit.

It is humbling to reflect that probably the first organised zoo in the world was established here by the indigenous Aztecs between the 15th and 16th century, in the original *Tenochtitlán*, long before the foundation of comparable zoos in Europe.

I greatly enjoyed working with my host at the National School of Biological Sciences, Dr Edmundo Diaz Pardo. I bade him a fond farewell as, in the company of Dr Raul Pineda-Lopez, I boarded a bus bound for the town of Querétaro – the capital of Querétaro State, one of thirty-one which make up the *Estados Unidos de Mexico*.

I joked with Raul that Mexican buses remind me of funeral hearses. They have opaque window blinds which

block out the outside world and, as the icily air-conditioned bus speeds along, the passengers lie in the pitch dark on deeply reclining seats watching noisy television programmes

(124 miles) northwest of Mexico City at a lower altitude (1,865 metres or 6,119 ft). It is famous for its leading role in the 1810 uprising for independence from Spain.

It was also the scene of the surrender and execution in 1867 of the Austrian Archduke Maximilian, whom the invading Napoleonic French unwisely tried to impose as Emperor. This turbulent tradition evidently continues, because we arrived at Querétaro in the midst of a vigorous demonstration by local Indians on their agricultural land rights. 'Viva villa cabrones! La revolucion no ha terminado!' screamed a huge banner posted on the municipal buildings.

We ducked behind the restless crowd and tough looking policemen and headed towards Querétaro's *Escuela de Biología, Centro Universitario*, where Raul is a senior member of staff.

This old, mellow, seat of learning was established in 1618 and, along

MEXICAN JOURNEY



the conclusion to an article in two parts by the Zoo's Director, Gordon McGregor Reid

on overhead sets. Any attempt to lift the blinds to get a glimpse of the lovely scenery is likely to be met with vigorous protests from within, as the sunlight makes it more difficult to view the 'shopping channel'.

With a population of about 500,000 people, Querétaro lies about 200 km

with much of the town, is built in the grand Spanish colonial style.

After being introduced to Raul's colleagues, I assisted in the evaluation of undergraduate and postgraduate courses in biology and gave talks on 'zoos and conservation'.

We then embarked on an exciting programme of field trips relating to habitat restoration and wildlife conservation projects supported by the university in the surrounding region of central Mexico.

We first visited the Cimatario National Park which is hilly, fairly arid and dominated in parts by spectacular, tree-like cacti (*Myrtilocactus geometrizans*) and with patches of glorious pink daisies (*Cosmos bipinnatus*).

Indeed, everywhere we went there were dazzling displays of wild flowers extending to the horizon – wonderful combinations of red, yellow, orange and white. This is one of my most pleasurable and abiding memories of Mexico.

We eventually reached the Huimilpan river, which drains ultimately to the Pacific Ocean (via the Lerma-Chapala system) and is overshadowed by the mountain *Péna de Bernal*.

There, at the village of San Pedro, we met up with a combined team of Mexican and north American experts on river basin regeneration. Raul and I helped in 'natural history style' educational activities with local villagers and schoolchildren.

There were also important practical lessons in agriculture, such as the use of fallen logs in preventing valuable top soil being washed away during rainstorms. Also included, by way of rehabilitation, were groups of young women from the cities. Some of them, although only in their early teens, had 'seen life' and already had children.

Remarkably, despite extreme social disadvantage, they had developed an interest in and great enthusiasm for the project and had become part of a wide and supportive family.

From there, Raul took me on to pools at San Jose. As in many other localities, the native fishes and other water life are rapidly declining:



▲ Typical cactus habitat in the region of Cimatario National Park: 'Prickly Pear' (*Opuntia*) foreground; 'Organ pipe' (*Cereus*) in the distance.

displaced by alien species like African Tilapia and European Carp (*Cyprinus carpio*).

These ill-conceived introductions were designed to increase the 'food value' of local fisheries but, instead, have had a disastrous impact on entire

including native crayfish (*Procambarus montezumae*), giant tadpoles of a frog (*Rana sierramadriensis*), a minnow (*Notropis salliei*) and two small goodeid fishes (*Goodea atripinnis* and *Xenotoca varieta*).

The two latter species are biological curiosities: they produce their young alive, rather than lay eggs, and the males copulate with the females using a 'penis' which is really a modified anal fin.

There are perhaps 37 different kinds of livebearing goodeid in Mexico, but many are already extinct and others are critically endangered.

Chester Zoo Aquarium is now active in saving and breeding from such fishes to ensure that they have a future (see page 5).

We are doing this in conjunction with the Zoo Federation's Livebearer Conservation Group, chaired by Colin Grist of Bristol Zoo.

In this context, I advised on the establishment of a small Aquarium for local fishes at Presa del Diablo, a village in the El Marques municipality. I met with the dynamic Mayor, Don Ceferino Ramirez, who is the prime mover behind a scheme to restore his village and save the local plants and animals, including fishes.



▲ Important for wildlife, cacti are also used as human food and in confectionary.

habitats. Sometimes things have been made worse by the introduction of Water Hyacinth, which grows rampantly to choke ponds and rob them of oxygen.

We did, however, find a few remaining indigens at San Jose,

▶ *Giant tadpoles, at San Jose pools, probably of *Rana sierramadriensis*.*



▶ *Derelict historical building at Presa del Diablo, now being restored for a small aquarium to show local fishes.*



▼ *Bright yellow butterflies fill the subtropical gorge leading to the gigantic caves of Cacabuamilpan.*



The village springs were once, via a historical aqueduct, a source of water for distant Querétaro. Sadly, due to excessive demand, they are now dry. This has led to deterioration of the village and a breakdown in the social fabric, including drug-taking and alcohol abuse.

With new inspiration from the Mayor, the locals are seeking to reinstate the springs and the surrounding area.

It was very uplifting to watch a whole town actively committed to environmental renewal.

Everyone was restoring old buildings (including for the Aquarium), removing graffiti, clearing up rubbish, digging out ditches and planting trees.

I was glad to have played a part in getting their Aquarium up-and-running.

I was also pleased to talk to Jorge Garcia, an expert in cactus conservation from the university. He is helping to save rare cacti from the surrounding hills and we discussed a possible collaboration with our zoological gardens at Chester.

As well as being important in the local diet (there are many culinary uses) cacti are crucial to wildlife.

For example, certain kinds of mice and woodpeckers feed among cactus stumps and a species of pygmy owl will roost inside decayed hollows.

The final part of my Mexican Journey took me to the delights of Cuernavaca - the 'land of eternal Spring' about 275 km south-west of Mexico City - and the *Universidad Autónoma del Estado de Morelos*.

We met up with a charming 'Scottish Mexican', Topiltzin Contreras-Macbeath! Topiltzin runs the Biological Sciences Research Division, where I gave a lecture.

I was introduced to investigators studying the overwhelming regional diversity of mammals, birds, reptiles, orchids, fungi and insects (there are, for instance, more than 35,000 different kinds of insects in the State, including a giant beetle, *Megasoma elephas*).

Field trips included a breathtaking journey to the protected Chichinuatzin region - home to a curious dwarf, short-eared 'rabbit' (*Neotomodon alstoni*).

We slowly ascended pine clad mountains soaring up to over 3000 metres above sea level and inspected 'alpine' lakes in the *Lagunas de Zempoala* National Park.

My last field trip was south of Cuernavaca, to the gigantic caves at

Cacahuamilpan set in a subtropical gorge full of orchids and bromeliads and alive with thousands of bright yellow butterflies. The cave dome is vast and the passages are not completely explored (one can walk for eight hours or more and not get to the end!).

Bats, martins and other interesting fauna aside, the caves are reputed to

contain a scientifically undescribed species of blind fish related to a better known characin (*Astyanax fasciatus*).

Time did not permit a lengthy exploration and so we did not find the blind fish.

However, my Mexican friends have generously invited me back . . . so there could be a next time!

▼ *Local Boa Constrictors (Boa constrictor imperator) being raised at Morelos University as part of a project for the conservation of biodiversity. There are about 79 different kinds of reptiles in the State.*



NO, we won't be coming back with a tan' – was my slightly terse reply to a colleague's enquiry just before leaving with Education colleague Sara Ruks on our ten day trip to seven North American zoos in January.

'It'll probably be colder than it is here.' How right we were.

The Americans don't necessarily do everything bigger and better than us, but they have developed some very imaginative ways of interpreting their animal collections for the public and we wanted to see if we could pick up some ideas for Chester Zoo. Many US zoos also run 'docent' schemes. Docents (from the Latin docere – to teach) are the stateside equivalent of zoo education volunteers.

New York

One of the few good things about flying is that it gives you a chance to get on with some work without any interruptions. Spent 5 hours working with Sara on some new chimpanzee interpretation signs for the zoo. Feeling quite virtuous!

The hotel is miles from the zoo and taxis cost a fortune so we get the subway to the Bronx instead. A rough

neighbourhood this. I am conscious of the new zoo camera attracting some attention from locals but surely no one would try anything in broad daylight? Sara asks if I have ever seen the film 'Fort Apache – the Bronx'. I haven't, but

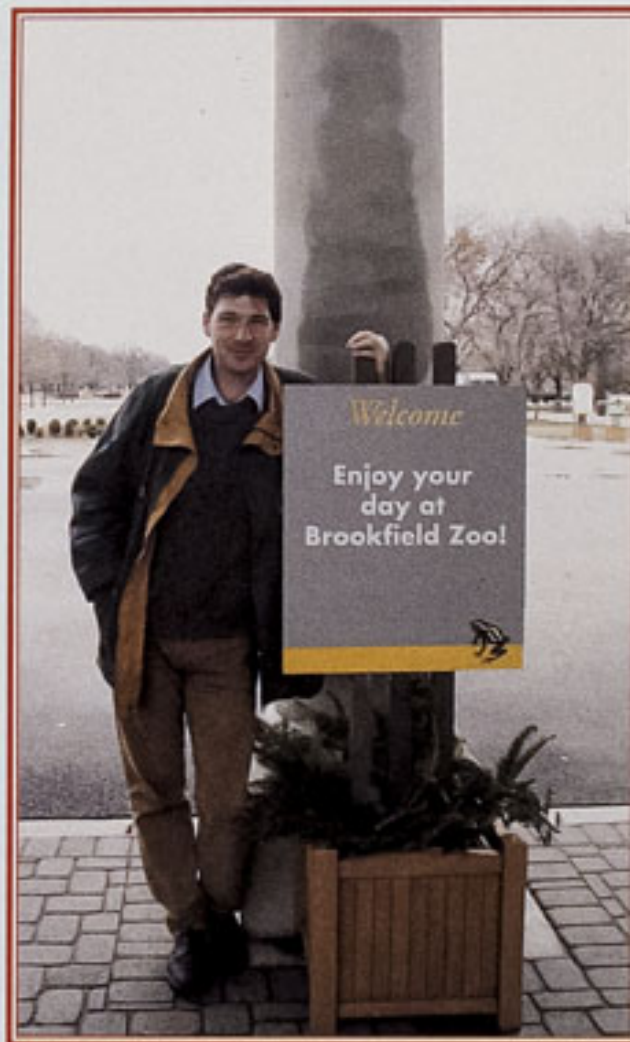
decide I am better spared the details of the plot. The zoo is in the middle of tower blocks and has a very unassuming entrance. Inside is huge with some spectacular exhibits.

The zoo is themed into geographical zones so we wander through Africa, Asia and around the rest of the world.

Tom Naiman, the Asst. Head of Education, tells us about the schools programme. This really is top rate stuff. The material they've developed is used as standard throughout much of the USA as part and parcel of their equivalent of the National Curriculum. I especially like the junior topic, 'Pablo the Python Looks at Animals' – a range of activities co-ordinated, in part, by a large stuffed snake.

There are 300 volunteers here! They call themselves FOZ – Friends of the Zoo and they do all sorts of things, including touch tables, outreach talks and teaching of school children. They do a pretty tough training course with exams at the end!

Lots of fabulous exhibits here. If you had to visit just one it would have to be Jungle World. This is of aircraft hangar proportions with a series of walkways through different kinds of jungle.



▲ Steve McKeown receives a warm welcome at Brookfield Zoo, Chicago.

supply them with any more oranges seeing as how good we are at breeding them. I say I will put a good word in with Gordon!

Outside is an odd structure like a series of modernistic electricity pylons leading from the Orang House to the Think Tank with ropes in between. Gradually we realise this is the famous 'Orang Way'. In the summer, oranges can climb overhead from one place to the other. We can't help thinking what would happen if one lost its grip and landed amongst a crowd of visitors. Not a pleasant thought.

Some very dramatic Komodo Dragons here, the first to breed in captivity. They look like something from Jurassic Park.

We take a trip into town afterwards and are nearly run down by two dozen motorbikes, several very large black cars and the President himself, complete with private ambulance in hot pursuit.

Cincinnati

What a strange country this is. We're staying in a motel called the Howard Johnson Lodge, known colloquially as Ho Jo. On my free pen it says to make a booking you should call, toll-free, 1800

and say 'I go Ho Jo'. The friendly desk clerk is an elementary (primary) school teacher who works in the hotel to make up his wages.

We're invited

to a social event in the Zoo. Ice skating, fruit punch and a buffet. All the education staff are there and one of them brings out some tame animals they use with the schools programmes – an eagle owl that had been on the go for thirty years, a skunk and a corn snake. Also, an ex-schoolteacher who runs the world famous Cat Ambassador Programme. She has a collection of tame cats including serval and cheetah. Great demonstration. She reckons cats (little ones too!) can be trained just as well as dogs and goes on to prove it. It isn't a circus act though. All the behaviour demonstrated is completely natural. I'm so enthralled that I forget to take a photo. Thankfully Sara remembers.

We decline an offer to join in the ice skating and go instead to the World of Wings. This, as you might expect is all about birds and has a whole section on the mechanics of flight. Not in itself the sort of thing kids would enjoy but it's put over in such an interesting way. You have to experiment with different sorts of beaks to feed 'baby birds' inside a hollow tree; use hawks' eyes to find prey; discover which kind of feet are best to do which job . . . all great fun. We try not to hog the activities because there are a fair

"If it's Tuesday then it must be Cincinnati!"

By Head of Education, Steve McKeown

Butterflies, leopards, monkeys, turtles, fish and flocks of rainforest birds all roam through vast lifelike forest glades with cliffs, waterfalls, lagoons, rivers all around. What an adventure! It feels strange coming out of this steamy tropical paradise back into the cold New York City air.

Washington

From FOZ to FONZ. (Friends of the National Zoo). Washington is colder than any place I've ever been in my life. My hands are almost too numb to work the camera and most of the animals are very sensibly indoors. Not many people around probably because Bill Clinton's inauguration is the day after tomorrow and they're all more interested in the razzmatazz that surrounds it.

Our first FONZ are working in the Think Tank - an interactive exploration of animal thinking. Fascinating stuff and lots of good ideas on how to get quite complex information over in a simple way. One of the research staff does a demonstration with two oranges. It really shows how clever they are and, in some ways how their thought processes are different to our own. One of the orang keeping staff asked if Chester could



▲ Sparring antelopes at Lincoln Park Zoo, Chicago.

number of children around.

Cincinnati has a very famous Winter Festival of Lights during which much of the Zoo is lit up and the gates are thrown open to the public after dark. They can wander where they like more or less and do ice skating, chestnut roasting and lots of other things.

Sadly we have to leave for the Ho Jo before we have seen everything and get ready for our flight to Chicago the next day.

Chicago

Welcome to the Windy City. Chicago is the friendliest city I've ever been to – everyone from bus drivers to hotel staff has really gone out of their way to be helpful. We're staying here a few days because we have two zoos to visit – Lincoln Park just round the corner from our hotel and the bigger Brookfield a little further away.

Lincoln Park is covered in snow with big drifts at the gates. We have a long chat with two volunteers, Emma and Samantha, who are manning a kiosk with skulls and things. They tell us that if they work a certain number of hours, they can claim a tax rebate. Very nice safari type uniforms.

Outside, not many animals are moving. Two sable antelope spar dramatically in the snow with the Sears Tower in the background. A bitter wind is blowing off Lake Erie and it begins to snow again – horizontally. We make for the Education facility where the Volunteer co-ordinator, Terry, takes us under her wing. Here the volunteers pay for their training and undergo a strict selection/assessment process. Some don't make it. Wonderful animal close contact room. Here we see snakes, armadillos, tenrecs, a parrot, snakes, and in the background a baby animal nursery with a tiny little orang abandoned by its mother.

A neat (in the US sense) way of collecting money for conservation here is a series of old traffic meters with animal heads attached to them. Children can't resist putting money in and watching a flag pop up in the window. Brookfield Zoo is a lot bigger with an Education Centre to die for! Their Connections programme for primary children is a series of units with a Zoo visit sandwiched between pre and post visit activity sessions.

They have spent a fortune on interpretation here but not all of it works to its best advantage. Some over-complicated activities to do with primate behaviour where children were using the moving parts more to make a noise than to access

information. Here we see the worst behaved class of children I have ever seen in my life. Real Channel 4 documentary material.

The bird house has some innovative stuff to do with flight and bird body design. They have a great computer 'game' where you pretend to put together a bird's body, considering which kind of feet you need, which sort of beak is best and so on. It's all fun, and educational but I wouldn't like to see it on a busy day with 200 kids fighting for a turn.

Swamp World is quite an experience. Underfoot is springy just like the real thing. We're told by a volunteer brandishing an alligator skull, that the floor is made from recycled car tyres. You could spend hours in here discovering the world of the swamp by pulling handles to simulate floods, pressing buttons to hear snatches of Cajun song, drinking real swamp water . . . but we run out of time and have to move on.

The airport has been closed due to worsening weather conditions. Stranded travellers are sleeping on the floor of the airport lounges. We hope they manage to clear the runway for the Toronto flight tomorrow.

Toronto

This really is the Frozen North. They are frantically trying to keep the road in front of the hotel clear but seem to be fighting a losing battle. Toronto Zoo is under about a foot of snow but they've had the ploughs out and the main danger is the ice underfoot. Caroline, the Education Officer, gives us coffee and ideas on the best places to visit to avoid being frozen to death. Like the big US zoos, Toronto is geographically themed, with huge globes to remind you which part of the world you're exploring. Toronto is very strong on 'Meet the Keeper' with eleven such opportunities throughout the day. Had we arrived earlier we could have met the Naked Mole Rat Keeper which would have been interesting. Naked Mole Rats make for fabulous displays but we're told they don't really breed very well when they're on public view. A pity because they are such appealing animals with fascinating behaviour.

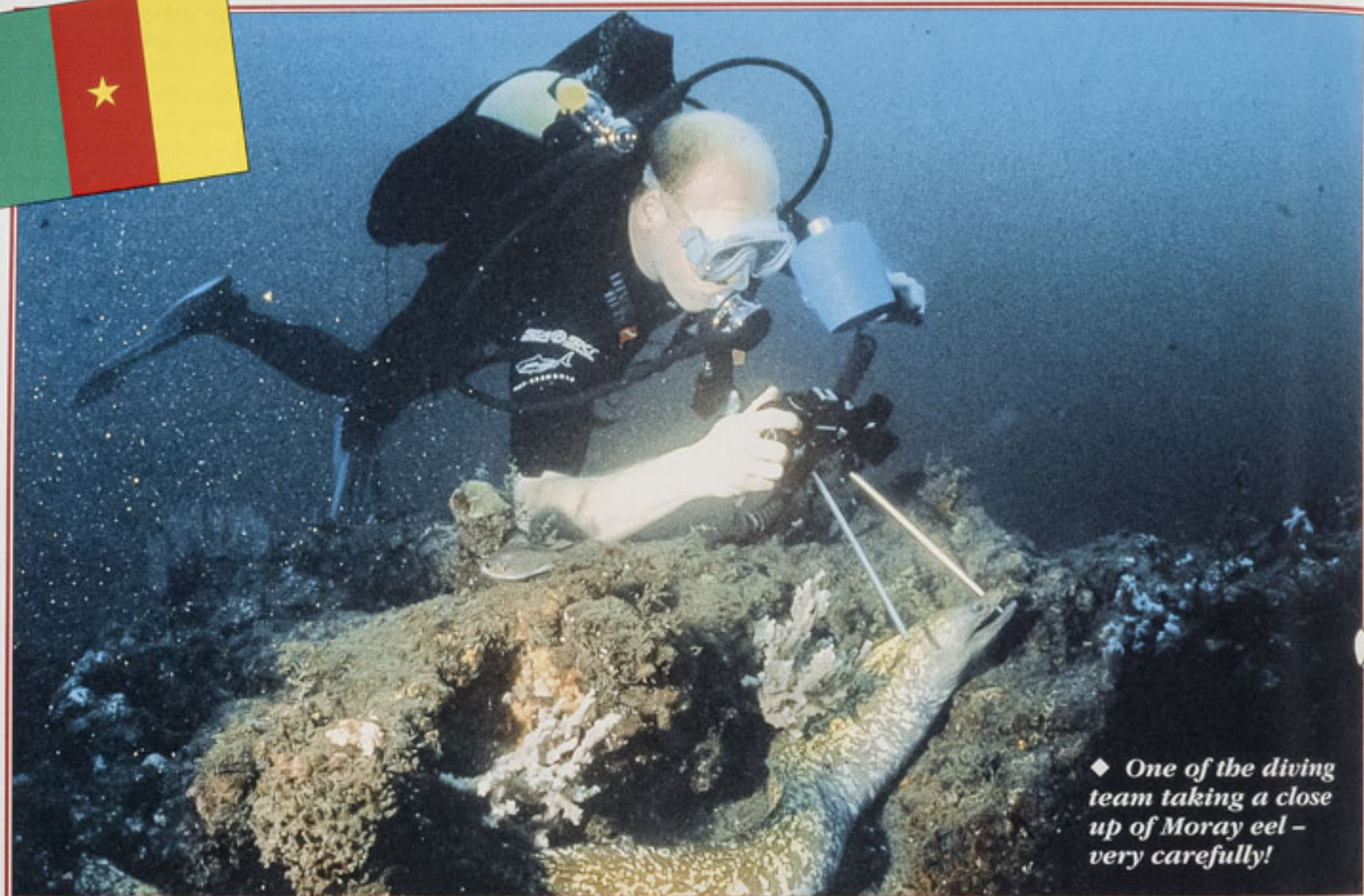
By mid-afternoon the weather has worsened with blizzard conditions forecast so we head back for the hotel and start to prepare for our homeward journey, bursting with new ideas, and looking forward to the relative warmth of an English spring.



▲ Sara Ruks discovers her classification at Brookfield Zoo!

▼ A 'Docent' takes Sara on a guided tour of the Jungle World themed area at The Bronx Zoo, New York.





◆ One of the diving team taking a close up of Moray eel – very carefully!

CAMEROON REEF SURVEY

Chester Zoo Aquarist Justin Bell writes about his recent working trip to Cameroon

IN February and March this year I took part in a reef survey in the Limbe region of Cameroon, West Africa. I was part of a team of aquarists and divers from Bristol Zoo, Deep Sea World and Current State Diving, all with an interest in coral reef conservation.

The object of this exercise was to record and then highlight environmental problems that we may come across while surveying marine fauna, and in collaboration with Dr Jean Folack, Chief of the Research Centre of Fisheries and Oceanography, discuss plausible solutions. (The Research Centre is meagrely funded, and finding ways to help finance this worthwhile centre is also part of our project).

Consideration to the needs of the local people were placed as a top priority. Without their backing, possible solutions to environmental problems could not be implemented, and 'our' idea of an environmental, economic and social development problem will be quite different to those coming from a developing nation.

This field of conservation has only

recently started to take a front seat in zoos around the UK. According to zoologist Marjorie Reaka-Kudla from the University of Maryland, almost 200,000 species that live on or near coral reefs could die out in the next 40 years. The destruction of tropical rainforest has been high profile in the campaign of UK zoos for conservation education, with reef destruction taking a back seat.

This should not be so, as the crisis of habitat and biodiversity loss is probably no less acute for the most diverse ecosystem in the sea than on land.

The idea to survey this localised and apparently restricted range of coral reefs came about when Colin Grist (Bristol Zoo aquarium) visited Limbe in 1991, to see an old colleague, Mr John Blair. During his stay, John introduced Colin to a young man called Sonny, who, when not involved with smuggling petrol from Nigeria, earned his living spearfishing and collecting corals.

Unfortunately I was unable to meet Sonny on this trip – according to local information, Sonny went out on one of his dubious excursions over a year ago and never returned!. Sonny was

obviously not the only coral collector, we noticed, as we travelled to and from dive sites. Dotted along one of the main routes out of Limbe were a number of roadside stalls displaying large quantities of hard coral.

Unfortunately, I didn't manage to take photographs of these stalls. My decision was swayed by the fact that when Colin had tried to photograph the displayed corals, he was threatened by a dozen or more villagers brandishing machetes. I decided not to upset the locals!

For the preliminary reef survey, I was based in Limbe, in luxury accommodation by local standards – with a ceiling fan – and a cook, aptly named Patience. (I don't think we managed to arrive on time for our evening meal once during the whole of our stay).

Patience's culinary skills knew no bounds, be it chicken or barracuda, and as long as you enjoyed spicy food you would never be disappointed – although we did insist on not being served bush meat.

We travelled each day to the agreed dive sites by boat, although a couple of dives were shore based, involving hard



▲ A freshwater cichlid – one of the 11 endemic species found in Lake Barombi, Mbo.

trekking through the jungle, with all the dive equipment having to be carried by hired locals. The condition of the limited reef systems was fairly good despite obvious signs of exploitation by local fishermen for the tourist trade, which is almost non-existent at present.

In the areas that the corals were found, the sea bed was predominantly black lava rock deposited by the active volcano, Mount Cameroon.

We are currently cataloguing the different coral species found in the surveyed sites, backing up this data with photographs recorded on each dive.

We will also be recording the indigenous fish species found on the reefs and try to assess what the impact on these animals will be if the coral diversity is dramatically affected or lost. Some of the fish species encountered were often tropical West Atlantic in origin, such as the Moray Eel *Muraena miliaris* and the French Angelfish, *Pomacanthus paru*.

Endemic species found there were the West African Angelfish, *Holocanthus africanus*, Sergeant Majors, *Abudefduf sexatilis*, *Chromis chromis* and a Gregory Damsel species *Stegastes unbricata*.

There were many other endemic species encountered including Surgeonfish *Acanthurus monroviae*, the Grouper *Cephalopholis taentops*, Moray Eels *Muraena melanotis* and *M. belena*, Triggerfishes *Balistes forcipitus* and the Butterflyfish *Cbaetodon robustus*.

We attempted to dive areas close to the Sonara Oil Refinery. The idea was to see if there was evidence of reef damage from pollution. We were soon dissuaded from this thought when a small motor boat carrying four men, armed with machine guns, left the oil refinery and sped out to our boat now anchored 800 metres from the shore.

Without needing to say a word, they circled the boat, pointing their guns at us, then sped off down the coast. Needless to say we up anchored and sped off in the opposite direction, and **no**, we decided photographs were inappropriate here too!

While in Cameroon we tried to dive some of the relatively unsurveyed crater lakes, but due to the almost impenetrable dense jungle leading up to the crater lakes, and then surrounding and overhanging the water's edge, we decided it was too dangerous to risk diving. Our main concern was that it seemed almost impossible to get out of the water in full dive kit without a helicopter.

This is a consideration for the next trip, possibly in August. We did, however, manage to survey Barombi Mbo, a crater lake known to contain 11 endemic species and four endemic genera of mouthbrooding Cichlids (Trewavas *et al.* 1972).

A considerable amount of work has already been undertaken by Chester Zoo Director Gordon Reid, at and around Barombi, but he was unable to dive there.

We spent a very hot day photographing the quite extensive mangroves found in this part of Cameroon, observing many

species of Fiddler Crabs and at least three kinds of Mudskipper. A troop of monkeys passed by overhead, but unfortunately too quickly for us to make out which species they were.

There were a number of fairly large jellyfish and a beautiful pair of tiny Kingfishers.

We observed only three species of mangrove tree and over all that day very little bird life.

As 1997 is International Year Of the Reef, we propose to produce a series of interpretation panels relevant to this subject, including our results from the Cameroon project.

The panels will be placed in the aquarium at Chester Zoo and possibly Bristol Zoo, London Zoo and Deep Sea World, targeting an audience of nearly 3 million visitors.

We will explain the biology of the reefs, starting with the individual polyps and moving on to reef bio-diversity, covering the fore reef, top reef and back reef.

They will also explain the reefs' role in preventing land erosion and its links with the fish nursery grounds in the mangrove areas.

▼ One of the many starfish species seen around the coast of Limbe.



WELCOME TO THE WOLVES!



THE maned wolf does not fit the lupine stereotype very well at all. It leads a more or less solitary existence, sharing an area of about 10 square miles with its mate for life. With its handsome reddish, white and black coat, large ears and long fine limbs adapted to travelling and stalking in tall grass, it might better be described as a red fox on stilts!

This elegant animal presents no more threat to human settlements than the loss of an occasional chicken, but despite this it is threatened throughout its range of Central and Eastern South America.

The majority of both wild and captive animals are found in Brazil, where the wolf is classified as endangered and is bred successfully in zoos.

Wolves suffer from a variety of diseases in the wild and in captivity, which both threaten their health and plague efforts to breed them in zoos.

As an aspirant wildlife vet, it was these diseases which interested me most when I was invited to join a colleague from the Brazilian Ministry of Agriculture in investigating the health and genetic status of these animals. They suffer from conditions such as Canine Distemper, Parvovirus and Hepatitis. These viruses have caused epidemics in maned wolves in zoos in North and South America, while the situation in the wild is unknown as investigation is hampered by the wolf's elusive nature. Overlap

between the wolf's wild range and human settlement with domestic dogs, presents a real danger of fatal disease infiltrating a highly susceptible and fragmented wild population. Such a disaster occurred recently in East Africa when the lion population in the Serengeti was devastated by Canine Distemper contracted from domestic dogs, via hyaenas.

Maned wolves are a new species to the collection. A pair of these very attractive animals – with a very distinctive scent! – arrived in the Spring, and are housed in the long paddock by the Condor Cliffs Aviary. You may have to look carefully – they are very secretive, retiring animals, active from dusk till dawn.

Adrian Allan, who received one of the zoo's Veterinary Studentship awards last year, visited Brazil to help survey the maned wolves in Brazilian zoos, with the object of studying diseases in the species.

This is his report of the trip.

Together with Brazilian colleagues, I spent last summer collecting samples from maned wolves in Brazilian zoos – thanks to the generosity of Chester Zoo's Veterinary Studentship. We are currently investigating the levels of antibodies in these animals to the potentially fatal viruses described above.

This information will tell us whether the wolves have been exposed to these viruses before, and hence how susceptible they are to a disease outbreak. In the future, we hope to compare samples from zoo animals with samples collected in the wild, thus

providing a picture of the danger posed by these viruses to the wild population and the need or otherwise to vaccinate wild wolves.

Brazilian folklore relates that a large snake can be found in the kidney of a freshly killed maned wolf; this is almost certainly a description of the Giant Kidney Worm which can reach up to two feet in length and as many as seven can be found in one kidney! It is thought that wild wolves may employ a natural defence against infection with this parasite.

Up to 50% of their diet is the fruit of a plant called lobeira, which looks like a large green tomato, tastes like a banana, and may contain a natural wormer to reduce the level of infection. It is also used by people as a treatment for malaria and diabetes.

Our research revealed a very high incidence of cystinuria in maned wolves, enabling the diet of affected animals to be adjusted to reduce the risk of disease and aiding in selection of unaffected animals for breeding programmes.

Chester Zoo's support has been invaluable. We aim firstly to contribute to a better understanding of the disease risks posed to the maned wolf; secondly to investigate the possible curative properties of an enigmatic plant and thirdly to improve the health status of the charismatic 'flag ship' species of South American conservation.

CAN you come and take some notes please Julie?

Not such an unusual request it seemed at the time – that was 18 months ago and the start of planning for the first ever International Conference on Zoo Marketing!

It actually started earlier than that, at the 1995 World Zoo Organisation (WZO) conference in Dublin when Gordon Reid and Henning Julin, the Director of Aalborg Zoo in Denmark, were asked by the WZO's Marketing Committee to look at how to go about holding such a conference in Europe. By the WZO meeting in the summer of 1996 plans were almost finalised, much to the amazement of the Chair of the Marketing Committee, Sherry Sheng of Washington Park Zoo in Portland, Oregon, USA!

Over the decades, very many inter-zoo meetings, both national and international have been held, but the overriding topic of conversation is always animals. This has been necessary to produce the detailed studbooks and breeding programmes that we have today.

Nevertheless, to ensure that the havens for wildlife that zoos have become are still there in future years, we have to market them. For many European zoos, marketing is still a very new concept and as such is often done by a member of staff 'wearing other hats'.

This conference was a major step forward in bringing together staff responsible for marketing in one place and encouraging collaboration between our fellow organisations. A total of 130 delegates took part from over 70 zoos in 30 different countries, as far apart as Australia and Israel.

The venue was the Aalborg Congress and Culture Centre in Denmark – an amazing building of huge proportions housing several conference rooms and suites. The largest of these can accommodate up to 2,000 participants! The facilities and



INTERNATIONAL ZOO MARKETING CONFERENCE

By Julie Whitear, Director's Assistant

catering were all top class and the event was well covered by Danish TV, radio and newspapers.

The run up to the conference was a race against time. The final few weeks involved changing bookings, checking flights, finalising speakers and agenda details and endless faxes between our office and our colleagues in Denmark! As well as Henning at the Zoo, the other main kingpin in the organising was Karl Otto Nicolajsen (known as 'Nic!'), our contact at the Aalborg Commercial Council (who, partly through the EU, very generously funded a large part of the conference) and Arne Zachariassen, the Congress Bureau Director. They all proved that Danish hospitality was first

class. Even with a very bumpy landing, I did enjoy my first ever flight!

Following the official opening by the Mayor of Aalborg, Sherry Sheng gave a stimulating keynote address with some thought-provoking ideas such as comparing zoos to the story of *Jurassic Park*. Some excellent presentations and workshops took place over the two days covering aspects such as handling the media, advertising, TV and radio, education, zoo guides, sound systems, visitor research, marketing with computers and the technicalities of zoo involvement with EAZA, WZO and European Parliament regulations.

For Chester's part, Gordon Reid chaired the second day's events, Chris Vere chaired a workshop on zoo guides; Pat Cade jointly chaired a workshop (and won the 'best workshop award') for hands-on public relations; Alan Jones gave an excellent presentation and exhibition on zoo retailing; Stephen McKeown hosted a workshop on best ideas for new customers and Keith Brown successfully demonstrated the use of the Internet to Zoos.

I tried to pull the whole lot together and be in five rooms at once! Thankfully I was ably

assisted by my Danish colleague Jayne Vintner who came to the rescue when a delegate from Latvia broke a shock absorber on his Skoda and we had to enlist assistance from a local garage! Following the conference was an excellent dinner and award ceremony, compered by Professor Roger Wheeler of Edinburgh Zoo and Chair of EAZA, with prizes awarded by Fred Daman (incoming President of WZO), Sherry Sheng and Gordon Reid.

The 'après-meeting' continued with sampling the Danish nightlife and many delegates visited Aalborg Zoo the next day before returning home to their respective countries.

REACHING OUT TO INDIA

Sally Walker, of Zoo Outreach Organisation in India, writes about how Chester Zoo's financial support is being spent.

WE have been invited to participate in the implementation of a Biodiversity Conservation Prioritisation Project (BCPP) for India.

This is an outcome of the Rio Convention, where signatory nations agreed to develop strategies for conservation of biodiversity in their country.

Zoo Outreach Organisation supports a regional network of the Conservation Breeding Specialist Group, and much of the donation given to us by the North of England Zoological Society is used towards this. For the past five years, this group has been conducting 'process workshops' to assess population viability of species

suspected to be in big trouble and to categorise species across the new IUCN Red List Criteria.

For the new project, we were asked to organise workshops to represent as many species of Indian plant and animal biodiversity as possible. India being a large, tropical country, this was no small task. Even if information were available for all species, assessing such large numbers for some groups – such as plants (17,000), invertebrates (maybe hundreds of thousands), and marine organisms (can't even guess!) is just impossible. Therefore we had to devise a strategy for some of the groups to test the process and

methodology. We had workshops for medicinal plants; mammals, marine organisms; amphibians; reptiles; freshwater fishes and invertebrates.

The Conservation Breeding Specialist Group has worked hard to train us so as to empower people in range countries to conduct their own workshops.

The objectives of the BCPP can be best summed up as an attempt to work with the Government and fellow citizens of India to meet our various obligations under the Convention on Biological Diversity. It is a privilege to drive such an important project and a joy to have the tools and skills to make it work.

FAMILY PORTRAITS

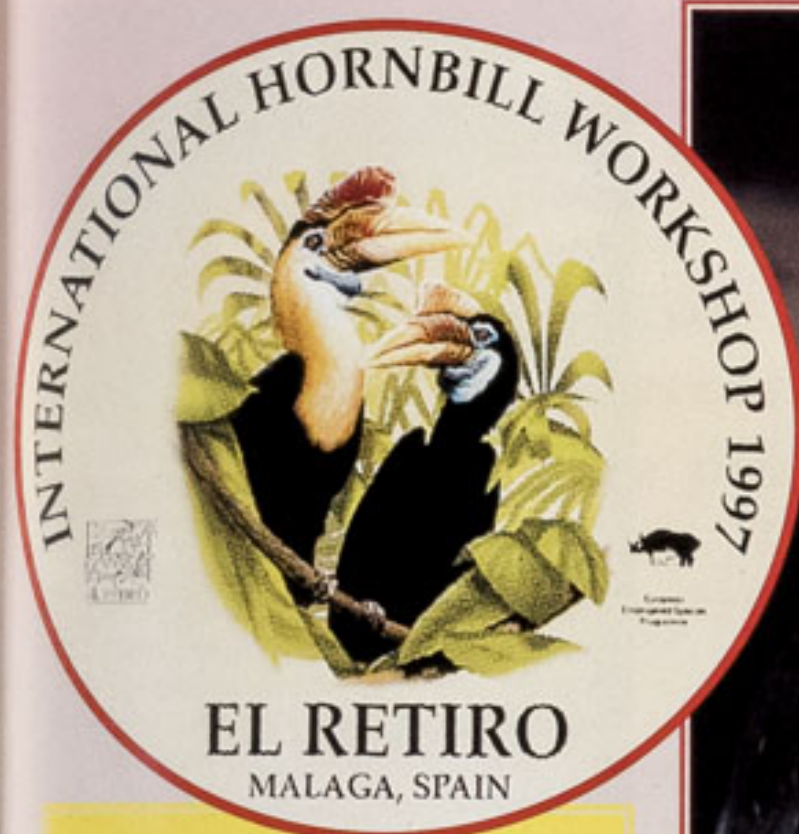
Anthony Hayward - zoo enthusiast - has spent many hours taking photographs in the zoo, over a number of years. He recently sent a selection of his work to Zoo Life - and these are two of our favourites.



▲ *Mother and sons - the Asiatic lioness, Chandani, with her second set of triplets.*



▼ *Sisters Emma and Subis are Sumatran orang utans, both born in Chester Zoo.*



In March, Curator of Birds, Dr Roger Wilkinson, was invited to attend the first international workshop on the conservation and management of hornbills, held in Malaga.



THE conference was convened by Koen Brouwer who chairs the EEP Hornbill TAG (Taxon Advisory Group) and organised and hosted in Malaga by Geer Scheres, Frank Lehmann and staff of Parque El Retiro.

I was invited as a member of the EEP Hornbill TAG and of the Great Pied Hornbill EEP Species Committee. Participants included Chris Shepherd and Wendy Worth of the Bronx Zoo, who chair the American SSP Hornbill TAG and Birdlife International Hornbill Specialist Group.

Both gave presentations and chaired workshop sessions. Husbandry guidelines for Great Pied Hornbills drafted by Wieke Galama were used as a basis for further workshop sessions on hornbill management.

Most zoo participants, including

myself, gave short slide presentations on their particular collections. San Diego Wildlife Park, New York Bronx Zoo, New Orleans Audubon Zoo, Vogelpark Walsrode (represented by Helmut Michi from their off-show breeding station on Mallorca) and El Retiro Park all have large collections of hornbills which have achieved important breeding successes. It was good to meet the curators from these collections and indulge in talking hornbills from breakfast to bedtime.

There was also the opportunity to network with the three foremost hornbill field workers. Dr Pilai Poonswad - by training a microbiologist - has written numerous papers on hornbills and exudes enthusiasm for hornbills.

Alan Kemp, author of the most recent hornbill monograph, was equally enthusiastic for field and zoo

conservation experts to share their experience and join together in hornbill conservation. Ms Lucia Lastimoza came to Chester a few years ago to gain experience working with hornbills and is now project manager for a centre for rescue and captive breeding of endangered species in the Philippines.

One of the many important results from this meeting was the agreement that the three separate hornbill associations: the EEP Hornbill TAG, the Birdlife Hornbill Group and the Asian Hornbill network, would now work together and produce a joint newsletter. The World Hornbill Network is to have its own web site which can be accessed on the internet at <http://www-tm.up.ac.za/hornbill>, on which the newsletter and other hornbill information will be available.

JUNIOR MEMBERS

MEETINGS AND TRIPS

HILBRE ISLAND

Saturday 28 June 1997.

Make a special note - this is the first time we have printed the date for this trip!

We plan to leave the zoo promptly from the staff car park at 9.00 am, returning at 5.00 pm. Spaces for this popular trip are limited owing to permit restrictions and over 10 year olds are invited to come along. We will walk over to Hilbre Island at low tide via Little Eye and the Middle Eye and hope to have Hilbre's warden, Vicki Seagar, along to help us with rockpooling and to point out areas of special interest such as the caves and the seals. We plan to return after our picnic lunch on the island before the tide comes in. Please ensure you dress appropriately or bring suitable kit for sun, wind or rain!

DAY WITH A KEEPER

Wednesday 23 July

Over 12's only for this, as it is hard work! Meet outside the Oakfield at 10.30. Finish at 4.00pm. Picnic lunch needed.

SUMMER BARBECUE Friday 15 August

Juniors over eight are invited to enjoy this special evening, from 7.00pm (staff entrance) until 9.45pm.

THE FOLLIES - HAWKSTONE PARK

Saturday 20 September

A strenuous walk through the nature ramble in the Shropshire hills. Leave the staff car park at 10.30 am, return at 4.30 pm. Over eight year olds. Bookings must be made for all events. Please ring Penny on 01244 380280, extension 215, not more than two weeks before the event. A small charge will be made for events involving transport, materials or foods. Just in case we have to change any dates or events - please read these pages in every issue of Zoo Life!

Thomas's Trip



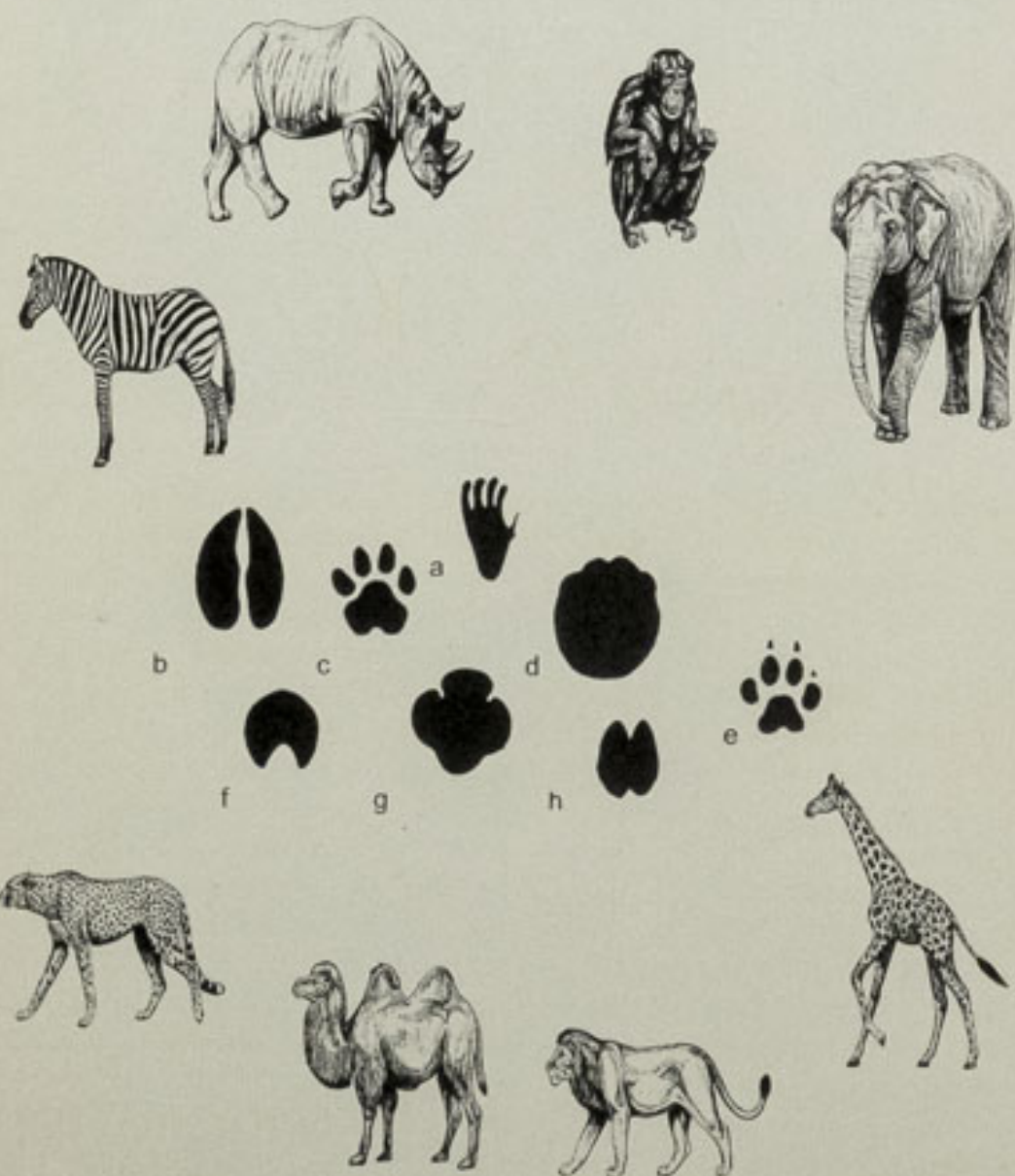
Junior Member Thomas Warriner enjoyed the trip to Lower Moss Wood so much, he has written this account of it for Zoo Life.

When we arrived the Pond Warden showed us some buzzards. We walked round the wood, and the warden told us about the animals and trees.

We saw a fox hole and loads of bird hides, and some sand with animal prints in it. After lunch we went to the animal hospital where we saw Barn owls, parakeets, and - best of all - foxes! Inside, we saw hedgehogs, blackbirds and ducks, and we were allowed to feed peanuts to the foxes. Afterwards we went pond dipping, and caught two fish and a water boatman!

Was it worth it? Yes - it was the best day of my life and I'll never forget it!

PUZZLE SPOT



Our quarterly puzzle gets more popular with each issue! The Spring issue crossword attracted a record number of entries.

The answers are:

1. Spectacled Owl. 2. Polar Bear.
3. Leopard. 4. Zebra.
5. Tiger. 6. Ostrich.
7. Penguin. 8. Giraffe.
9. Bear 10. Anaconda.
11. Owl
- 12 \ 13 Ring-tailed Lemur.

The first correct entry opened was from David Reid of Guilden Sutton. Well done David!

◆ **This time we want you to match the animals to the correct footprint. The footprints all have letters. Write the same letter next to the animal you think it belongs to. Send your entries to: Junior Competition, Zoo Life Office, Chester Zoo, Upton-by-Chester, CH2 1LH.**

Prize for first correct entry opened is a £10 Gift Voucher for the zoo shops.

Entries must reach us by 15th July.

AN EXCITING ANNOUNCEMENT FOR JUNIOR MEMBERS

Are you interested in a week's holiday away from your parents??? Then read on . . .

Last year's four-day trip for Junior Members to Rutland was so successful, we are planning another, longer trip this year.

The venue is

THE EAST DENE CENTRE on the ISLE OF WIGHT

**We will spend 7 days, from
FRIDAY 25th JULY to
FRIDAY 1st AUGUST**

This pretty island, just off the South Coast of England, with its varied and beautiful scenery, offers wonderful opportunities for anyone interested in animals and the countryside. The island is known for its lovely sunny weather! The fun and activity based holiday has been planned especially for us, to take into account our interest in animals, the environment and natural history. Here's a taste of some of the activities and visits planned:

VISITS

Sandown Zoo; Carisbrooke Castle; the Rare Breeds Farm; Dinosaur Farm; the Botanic Gardens.

DAYTIME ACTIVITIES

Nature walks; fossil hunting; orienteering; beach and shoreline discoveries and rock pooling.

EVENING ACTIVITIES

Night walk; campfire; 'Who Dunnit' and a disco.

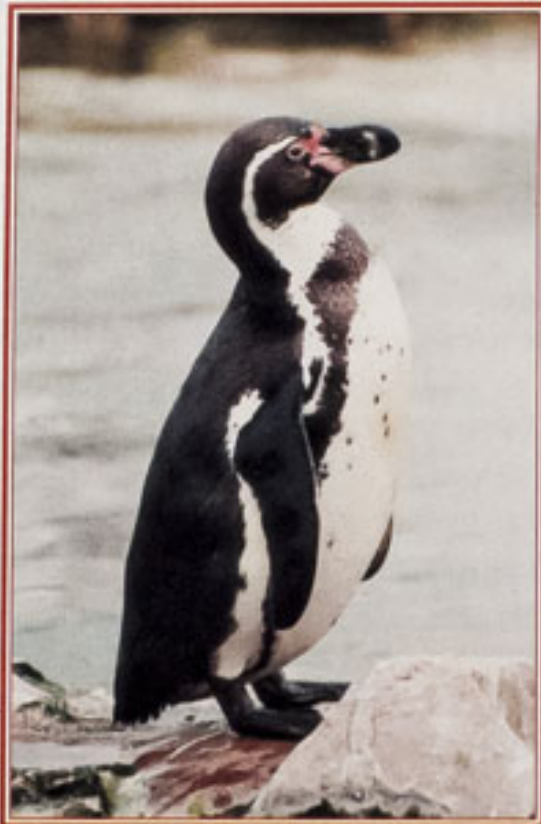
The TOTAL cost of the holiday is £260 per member.

This is excellent value as it includes all travel costs, accommodation, all meals and all the extra visits we will make whilst on the island. Places are limited to 30, so please contact Penny Rudd as soon as possible if you are interested or would like more information. Penny's number at the zoo is

01244 650215

Arrivals ○ Births ○ and ○ Hatchings ○

FEBRUARY, MARCH & APRIL 1997



◆ Humboldt's Penguin



◆ Common Zebra

(Both photographs by Martin Kilty)

MAMMALS				BIRDS <i>continued</i>			
*Rodrigues Fruit Bat	<i>Pteropus rodricensis</i>	0.1.1	Born	*Scarlet Macaw	<i>Ara macao</i>	1.0.0	Arrival
*Ring-tailed Lemur	<i>Lemur catta</i>	0.0.8	Born	*Blue-throated Conure	<i>Pyrrhura cruentata</i>	1.0.0	Arrival
*Cotton Top Tamarin	<i>Saguinus oedipus</i>	0.0.1	Born	Red-crested Turaco	<i>Tauraco erythrolophus</i>	0.0.1	Hatched
*Columbian Black Spider Monkey	<i>Ateles fusciceps robustus</i>	0.0.1	Born	*Schalow's Turaco	<i>Tauraco schalowi</i>	0.0.2	Hatched
*Maned Wolf	<i>Chrysocyon brachyurus</i>	1.1.0	Arrival	*White-faced Scops owl	<i>Otus leucotis</i>	0.1.0	Arrival
Common Zebra	<i>Equus burchelli boebsmi</i>	0.0.1	Born	*Spectacled Owl	<i>Pulsatrix perspicillata</i>	0.0.2	Hatched
Lesser Malayan Mouse Deer	<i>Tragulus javanicus</i>	1.0.0	Arrival	Lilac-breasted Roller	<i>Coracias caudata</i>	1.0.0	Arrival
Axis Deer	<i>Cervus axis</i>	1.0.0	Born	Trumpeter Hornbill	<i>Bycanistes buccinator</i>	1.0.0	Arrival
*Père David's Deer	<i>Elaphurus davidianus</i>	0.1.2	Born	White-rumped Shama	<i>Copsychus malabaricus</i>	0.0.1	Hatched
Sitatunga	<i>Tragelaphus spekei</i>	1.0.1	Born	*Yellow-throated			
*Kafue Flats Red Lechwe	<i>Kobus leche kafuensis</i>	1.3.0	Born	Laughing Thrush	<i>Garrulax galbanus</i>	1.0.0	Arrival
*Scimitar Horned Oryx	<i>Oryx dammah</i>	1.0.3	Born	*Omei Shan Liocichla,	<i>Liocichla omeiensis</i>	0.3.0	Arrival
*Blackbuck	<i>Antelope cervicapra</i>	0.1.0	Born	Silver-beaked Tanager	<i>Rampocelus carbo</i>	0.1.0	Arrival
*Arabian Gazelle	<i>Gazella gazella arabica</i>	0.1.0	Born	Mexican House Finch	<i>Carpodacus mexicanus</i>	3.2.0	Arrival
American Bison	<i>Bison bison</i>	0.0.1	Born	Yellow-fronted Canary	<i>Serinus mozambicus</i>	1.2.0	Arrival
*Barasingha	<i>Cervus duvauceli</i>	0.3.0	Arrival	Orange-cheeked Waxbill	<i>Estrilda melpoda</i>	0.0.2	Arrival
				Spice Finch	<i>Lonchura punctulata</i>	1.0.0	Arrival
				Zebra Finch	<i>Poephila guffata</i>	1.0.0	Arrival
				Rufous-collared Sparrow	<i>Zonotrichia capensis</i>	0.0.2	Arrival
				Red-billed Blue Magpie	<i>Urocissa erythrorhyncha</i>	0.0.4	Hatched
BIRDS				REPTILES			
*Humboldt's Penguin	<i>Spheniscus humboldti</i>	0.0.18	Hatched	*Four-horned Chameleon	<i>Chameleo quadricornis</i>	2.3.0	Arrival
*Scarlet Ibis	<i>Eudocimus ruber</i>	1.2.0	Arrival	Tokay Gecko	<i>Gekko gekko</i>	0.0.2	Hatched
*Black-necked Swan	<i>Cygnus melanocoryphus</i>	0.1.0	Arrival	Leopard Gecko	<i>Eublepharis macularius</i>	0.0.9	Hatched
*Hawaiian Goose	<i>Branta sandvicensis</i>	0.0.3	Hatched	Madagascar Giant Day Gecko	<i>Phelesuma madagascariensis grandis</i>	0.0.2	Hatched
*Baikal Teal	<i>Anas formosa</i>	1.0.0	Arrival	*Boa Constrictor	<i>Constrictor constrictor</i>	0.1.0	Arrival
Hooded Merganser	<i>Mergus cucullatus</i>	0.1.0	Arrival	Central American			
Turkey Vulture	<i>Cathartes aura</i>	2.2.0	Arrival	Indigo Snake	<i>Drymarchon corais melanurus</i>	1.1.0	Arrival
*Crested Coracora	<i>Polyborus plancus</i>	1.0.0	Arrival	*Indian Cobra	<i>Naja naja</i>	0.0.25	Hatched
*Roulroul Partridge	<i>Rollulus roulroul</i>	2.0.0	Arrival				
*Lady Amherst's Pheasant	<i>Chrysolophus amherstiae</i>	0.1.0	Arrival				
*Palawan Peacock Pheasant	<i>Polyplectron emphanum</i>	0.0.2	Hatched				
*Malayan Crestless Fireback	<i>Lophura e. erythroptthalma</i>	0.1.0	Arrival				
*Red-crowned Crane	<i>Grus japonensis</i>	0.0.1	Hatched				
White-naped Crane	<i>Grus vipio</i>	1.0.0	Arrival				
*West African Crowned Crane	<i>Balearica pavonina pavonina</i>	0.1.0	Arrival				
Northern Lapwing	<i>Vanellus vanellus</i>	0.0.16	Hatched				
Speckled Pigeon	<i>Columba guinea</i>	0.0.4	Hatched				
*Luzon Bleeding Heart Pigeon	<i>Gallicolumba luzonica</i>	0.0.1	Hatched				
*Nicobar Pigeon	<i>Caloenas nicobarica</i>	0.0.1	Hatched				
*Blue-streaked Lory	<i>Eos reticulata</i>	0.1.0	Arrival				
*Duyvenbode's Lory	<i>Chalcopsitta duyvenbodei</i>	1.0.0	Arrival				
*Stella's Lorikeet	<i>Charmosyna papou</i>	2.0.0	Arrival				
*Musschenbroek's Lorikeet	<i>Neopsittacus musschenbroekii</i>	1.1.0	Arrival				
Black-checked Lovebird	<i>Agapornis nigrigenis</i>	0.0.2	Arrival				
*Derbyan Parrakeet	<i>Psittacula derbiana</i>	0.0.3	Hatched				
FISH							
*Silver Shark	<i>Balantiocheilus melanopterus</i>	0.0.1	Arrival				
Pike Livebearer	<i>Belonesox belizanus</i>	0.0.20	Bred				
Koi Carp	<i>Cyprinus carpio</i>	0.0.1	Arrival				
*Killie Fish	<i>Notobranchius korthausae</i>	0.0.17	Bred				
*Golden Sawfin Goodeid	<i>Skiffia francesae</i>	0.0.13	Arrival				
*Golden Sawfin Goodeid	<i>Skiffia francesae</i>	0.0.14	Bred				
Halfbeak	<i>Nomorambus ebrardti</i>	0.0.17	Bred				
Fire Clown Fish	<i>Amblyprion ephippium</i>	0.0.12	Bred				
Banggai Cardinal Fish	<i>Pterapogon kauderni</i>	0.0.27	Bred				
Peacock Goby	<i>Tateumidna ocellicauda</i>	0.0.23	Bred				