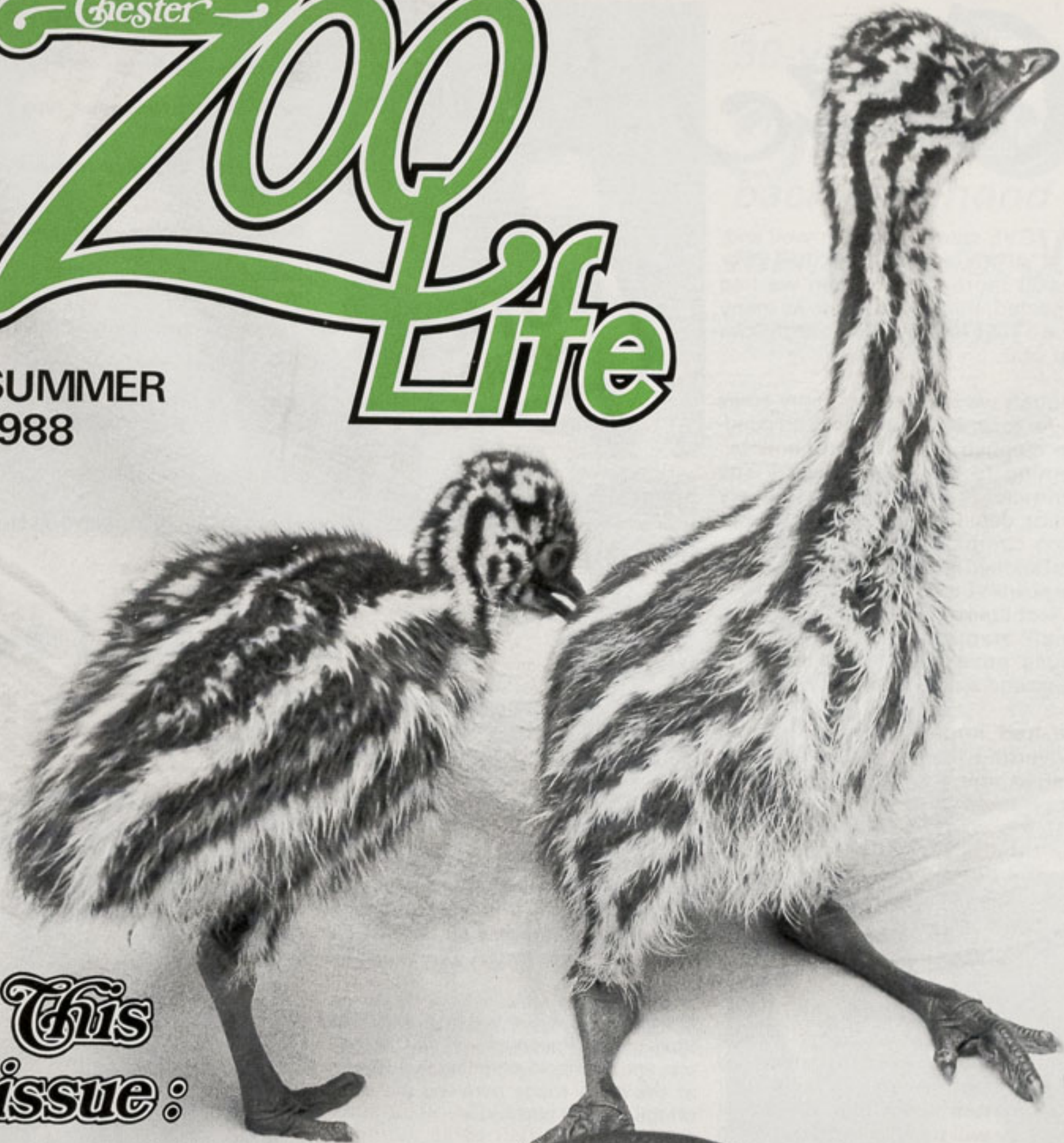


Chester Zoo & Life

SUMMER
1988

This issue:

- Our new President
- Baby camel—first picture
- New Chimp House
- Giant Panda Conference



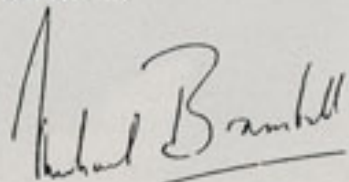
Chez Nous

WE'VE started the year well and, at the end of April, had over 40,000 more visitors than we had expected, though not quite as many as we had had by the end of April last year.

Though we had far too many areas under reconstruction or closed pending reconstruction, we are now beginning to reap the benefits. The perimeter is finished in all but very minor detail. The parrot house has been completely re-roofed, as has the Oakfield kitchen. The work behind the scenes in the ape house is now in its last stages. The elephant house, small mammal house and rhino house have all got new keepers' areas and animal kitchens.

We had hoped to have finished converting the beaver pond into a coati exhibit, but were unexpectedly side-tracked when we were informed that the coypu exhibit would not meet the new regulations. Consequently, a new coypu exhibit is being built near the tropical house. This should be finished in a short time, and we can get back on schedule with the coatis and also the camel house roof.

Most exciting of all, work on the chimpanzee house has started, and the chimpanzees should be in their new quarters next winter. We expect that they will be able to go out on to the islands on most days through the winter and, even if they decide to stay in (it will be their own choice), they will still be on public view. It was the restoration after ten years of winter and rough-weather viewing of one of our major species groups at the zoo which attracted the English Tourist Board into making a £40,000 grant to us. We have already collected £100,000 in cash and commitments towards this scheme. If we can get another £200,000 by the end of the year, we will have achieved this most important redevelopment without straining our resources.



Members' Meetings 1988-1989

Director's Summer Walkabouts

Wednesday, 15th June, 1988

Thursday, 7th July, 1988

THE Director will be conducting two tours of the collection on the evenings of 15th June and 7th July. The profits from the evenings will go towards the new chimpanzee house.

Entrance to the Zoo will be through the time office. The tours will start at 7.00 pm, and members attending should meet at the cross-roads between the canal bridge and the bird house.

The evening will finish with a hot supper in the Oakfield restaurant.

Tickets are now available from Maureen Allsopp, and cost £4.00 each.

Prior booking for these evening tours will be necessary.

Saturday, 3rd September, 1988, 2.30 pm
in the Lecture Hall

Human Origins — Professor Bernard Wood

(Oakfield restaurant closed for a wedding reception, but Cheshire room open all day for coffees, teas and light snacks).

Saturday, 8th October, 1988, 2.30 pm
in the Lecture Hall

Where Solitude Reigns—Mr Roy Rhodes.

Saturday, 26th November, 1988, 2.30 pm
in the Lecture Hall

Dinosaurs—From Egg to Fossil—Dr B. Halstead.

December Meeting—To be arranged.

Saturday, 21st January, 1989, 2.30 pm
in the Lecture Hall

The Fascination of Birds—Rev Hugh Linn.

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Front cover: At this time of year, there are new babies in many areas of the zoo. Emu chicks are amongst the prettiest, and our cover features two of the 16 hatched this year. Keeper Nick Manning (*above*) gives a helping hand to a couple of chicks just a few days old.

(Picture by Sunday Mirror)

Chester Zoo Life is edited by Pat Cade



30-year-old party invitation brings back childhood memories for our new President

WELCOME TO HIS GRACE THE PRESIDENT!



THE zoo now has its first President—His Grace the Duke of Westminster.

The Presidency was accepted by the Duke at a special members' meeting in March. Dinah, Lady Tollemache, and Professor Oliver King accepted the posts of Vice-Presidents at the meeting.

Council Chairman Andrew Thompson completely surprised the Duke—and gave him considerable amusement—when a small memento from the zoo's archives was produced. It was an invitation from the very young Gerald Grosvenor and his sisters to attend a party at the zoo. The bright blue card, illustrated with a tiger, read:—

"Would you like to lunch at the Chester Zoo with Leonora, Jane and Gerald Grosvenor, on Tuesday, 22nd December, at 12.45pm? Please tell me if your parents would like to come too. Please bring this card with you. RSVP, The Duchess of Westminster, Saighton, Chester."

The Duke agreed with the Director that this must have been in 1959.

In addition, the Duke was presented with an engraved claret jug, and the new Vice-Presidents each received an engraved rose bowl.

Dinah, Lady Tollemache has been a member since 1975, when she succeeded her late husband on the council. She served until 1983.

Professor J. Oliver King has been a member since 1962, and succeeded Miss Geraldine Russell Allen as Chairman in 1972, and served until 1986.

The Duke made presentations to long-serving members of staff: Peter Braithwaite, Geoff Pollard, Colin Pritchard, Vic Dodd, Michael Coupe and Arnold Johnson. They each received a glass engraved goblet. Fred Blythe, who was unable to attend, also merited a long-service award. Reg Morgan, recently retired after 22 years as a gardener, was presented with a framed photograph of the gardens.



Photographs—

Top: Chairman, Andrew Thompson, reads the party invitation to the Duke of Westminster, centre, and Director Michael Brambell.

Centre: The Duke makes a presentation to Vice-President Professor King.

Above: Dinah, Lady Tollemache, receives her engraved rose bowl from His Grace.

ONE HUMP OR TWO?

ZOO REVIEW



Mother Olga stays close to young Nadia, while the next-door neighbour peers over the wall to admire the new baby.

Picture by Daily Telegraph

CAMEL House keepers were delighted to announce the birth of Nadia on 18th April—the first Bactrian Camel born in the zoo since 1966.

Her mother, three-year-old Olga, came to Chester from Blackpool Zoo in December 1986, as part of the joint management programme. Proud father is Jimmy.

Nadia earned a lot of very welcome publicity for the zoo in the week before the Spring Bank Holiday. Both BBC and Granada sent their television cameras along, and there were photographers from ten newspapers at her first photo-call.

Zoo month to raise funds for the Diana Monkeys

JULY is once again deemed to be Zoo Month by the National Federation of Zoos. This year, the special appeal is to raise £15,000 for a study of the Diana Monkeys on the island of Tiwai, Sierra Leone. Although Chester does not hold this particular species, we shall be joining in some of the nationally-organised zoo activities during the month, such as Photographers' Sunday, Gardeners' Sunday and low-admission days for members of the recognised youth movements.



The joys of springing!

THIS picture of one of three young Ankole calves born in the cattle house during April is a lovely illustration of the zoo in springtime. A glance at the back page will tell you all the new arrivals in the various animal houses and paddocks this year. As always, spring has been a very busy but very rewarding time for the keeping staff.

THE man with the task of making 10,000 commemorative bricks for our chimp house appeal is Bill Gosson, of Pelmarail, Allport Lane, Bromborough, South Wirral.

Bill usually makes terracotta garden pots in a variety of shapes, including animals.

"This is one of the most unusual jobs I have ever been given," he said. "I use a mould for the basic brick, but the finishing work—including the three holes for pens and pencils—is all done by hand."

CAPTAIN NEMO

LAATEST arrival in the sealion pool is a four-year-old male, who arrived in March from Whippsnade Zoo. His name is Nemo—promptly called Captain Nemo by the staff! Nemo was born at Colwyn Bay Zoo in 1983.

BRICKIE BILL



"Brickie Bill"—Bill Gosson puts the finishing touch to another chimp house brick.

DON'T BE CAMERA-SHY

ENTRIES are already coming in for this year's photographic competition. The rules for the 1988 competition are very simple. There is just one category—"My Favourite Chester Zoo Photograph". There are two classes for adults—one for prints and one for slides—and one class for juniors under 16.

The competition will be judged in three stages during the year, with three prize-winners at each stage. All entries in the first two stages will be included in the final judging.

Kodak, Fishwicks of Haydock and Color 3 Photo Labs of Widnes have again donated some generous prizes, and the overall winner will be declared "Zoo Photographer of the Year" and receive Kodak's top-of-the-range compact camera, the 35 AF2.

Pick up your entry form at the zoo, or send us a stamped addressed envelope, and we will post one.

They made it!

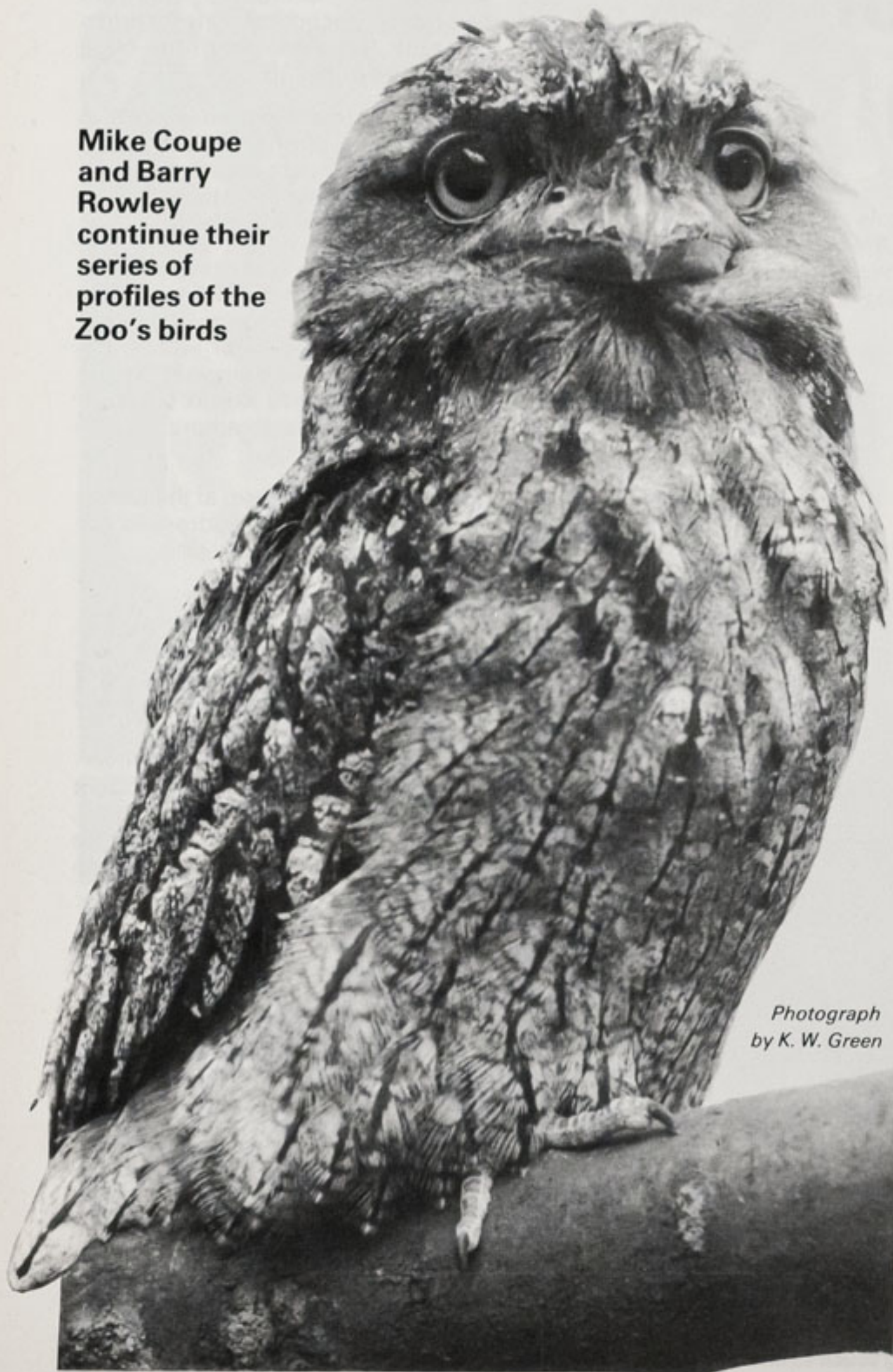
THE latest ideas from our ever-inventive education department are a series of "Let's Make" packs, for sale in the zoo shops. These are fun items for children, but based on sound educational material.

The first five are now available, priced at around £1.00, and they are selling very well. The first three packs contain sets of sheets giving ideas for making zoo animals from paper plates; using paper bags to make zoo animals; and templates for making masks, cut-outs, etc.

There is a kit giving instructions, card and paper to make a model prairie marmot colony, which, when made up and opened, displays the marmots underground. The fifth kit gives instructions, card, paper, etc, to make Zoo Animal Lotto—a very simple game for young children.

THE FROGMOUTH REALLY SLEEPS LIKE A LOG!

Mike Coupe
and Barry
Rowley
continue their
series of
profiles of the
Zoo's birds



*Photograph
by K. W. Green*

WHAT is a Nightjar, Nighthawk, Frogmouth Pottoo or a Goat-sucker?

These names all refer to a group of birds classified as Caprimulgiformes, of which there are about 100 different species, and which are mainly nocturnal insect-eaters.

At the zoo, we have two male Tawny Frogmouths—a large species, native to Australia's New Guinea. The birds were both bred in captivity during 1980 at Taronga Park Zoo in Sydney. These strange-looking birds can be found in the bird house, and usually can be seen fast asleep in their characteristic pose, resembling a tree-trunk! In fact, many people walk past the aviary, so good a camouflage is the Frogmouth's grey speckled plumage.

As their name implies, Frogmouths have enormous mouths, which we are told are soft. But if you have ever given one food, and not taken your finger away quickly, you will know that they have a very sharp tip to the beak.

In the Zoo, they relish a diet of dead young and adult mice, a little meat and, at night, some locusts.

They are not the easiest birds to maintain in captivity, as they are nocturnal and will not take food for themselves during the day. Dead mice left overnight remain uneaten. We have to hand-feed them, to make sure that they have a proper diet. If you touch the bristle-like area above the beak, they open their mouths, and we pop the food in! We suspect that they also supplement their diet by catching the wild mice which enter their aviary, as this is one of the few mouse-free areas.

It is commonly thought that Frogmouths just fly around at night, mouths open, catching insects in the same manner as our own native summer-visiting Nightjar. This is not the case. Frogmouths are not particularly agile, and take most of their prey of large insects and small mammals on the ground, catching them by surprise attack.



Another interesting fact about these birds is that they lack a preen gland. Most birds secrete oil from the preen gland, which is then spread over the feathers by the bird's beak when it grooms or preens its feathers. Instead, Frogmouths produce fine, white powder from two areas at the side of the rump. Their feathers are liberally covered with this powder, which is produced in sufficiently large quantities to coat the glass front of their aviary, making glass-cleaning a daily task for the keepers. Obviously, this powder makes their plumage very waterproof, as they love to be bathed with the hosepipe, stretching their wings out to catch every drop of water.

You may have noticed that our birds are sitting on eggs! Rest assured—they are both males! We have given them some bantam eggs to brood. Obviously, in the wild, male Frogmouths must do a large share of the incubation, as our two birds sit on bantam eggs for hour after hour.

In the future, we hope to pair up our two males, as our aim is to breed as many species as possible. We envisage some difficulties rearing any of these strictly nocturnal offspring, whose parents have to be woken up and hand-fed during the day and who will not touch dead food left for them overnight.

Any volunteers for the night-shift—or can we have a nocturnal house for the birds? Why should those Rodriguez Bats have all the luck?

A FEW CHANGES

JUST as the zoo's animal collection constantly changes, we thought that members might like to note the changes that marketing division made in its operations for Easter and summer. Alphabetical order . . .

Information Kiosk

Two new display windows, new display rack for educational items and a double-louvred window for the staff to sell through. Merchandise extended to include films, postcards and stamps, newspapers, chimp "bricks", as well as souvenir guides.

Jubilee Restaurant

New light-boxes and illuminated transparencies of the menus in the main cafeteria and the fast food, new drinks machines, new pizza oven, new microwave for burgers, new "Slush Puppie" machine, table-tidies, high-chairs, exterior woodwork re-varnished and painting and decorating indoors, thanks to MSC help.

Jubilee Kiosks

New display units for counters and windows, made by MSC team.

The Fountain

Concourse—New floor (thank goodness), extra lights and a complete re-paint inside. **Gift Shop**—New floor, around 25 per cent extra selling area, new display material and a re-paint; also extra display lighting. **Souvenir Shop**—More lights and display material, new "sweet shop" within the shop, and around 25 per cent more selling area.

Kiosks

Additional display material, for a larger range of sweets, crisps and confectionery, plus a Mars Zoo Trail free entry quiz. New hot-dog facilities in some sites.

Oasis

New "Slush Puppie" and hot-dog machines, plus a new kitchen floor and new work-tops.

Oakfield

A totally re-built kitchen—inside and out—with new access steps, new doors to the main restaurant, new curtains and carpets in the Acorn Bar and Members' Room, and new menus too.

Plant Shop

New enterprise by the North Gate—with its own greenhouse and displays.

Rainbow

New hot-dog machines and display material.

* * * * *

So much for the facilities on site; but for those most important folk—the staff—there were new uniforms for the caterers, new sweat-shirts for the shops, training sessions on zoo knowledge, and sales techniques for everyone, plus special sessions from Mars, Walls and Lyons for the staff selling their lines. And we even have a Lyons Maid trike for the catering manager to send to zoo "hot-spots" . . .

Was it all worthwhile? In a word—YES. The results on the Easter Monday were an all-time record for receipts, and the numbers admitted to the gardens were even greater than last year. Well done all!

Chris Vere
Marketing Manager



Peter Jones from Hoole Lane, Chester, a keen gardener, offers plants and friendly advice in the new garden shop.

THE NEW CHIMP HOUSE NOW UNDERWAY

*Circular building
scheduled for
completion in the
autumn*



THOUSANDS OF BRICKS FOR SALE

IN October this year, Chester Zoo's 21 chimps will be moving into new, custom-built accommodation, with central heating, composite flooring, nursery area, dormitories, climbing apparatus, and year-round viewing facilities. Chester's famous chimp island is widely acclaimed throughout Europe. It gives the chimps near-natural living conditions, with no barriers — other than a moat — between animal and visitor.

Their accommodation, however, has no viewing facilities for the public and, during the coldest of the winter weather, the chimps stay inside, and visitors miss one of the zoo's greatest attractions.

The new house, circular in shape, will have a public walk-way all around the perimeter, with viewing through a protective laminated window. A shallow moat is to surround the chimps' living area, with the dual purpose of controlling humidity and preventing the chimps climbing the walls!

The 40-foot diameter circle will hold a massive climbing-frame, extending almost to the 30-foot-high roof, giving the animals the freedom of the whole volume of the house. They will have access to the island through doors fitted with flaps to stop heat escaping and, except for very cold days, will have the freedom to choose whether to be indoors or out.

Bricks and Bread

The new house will cost in excess of £¼-million, and the zoo is launching a fund-raising campaign to help to finance the venture. Roberts Bakery of Northwich are supporting the appeal with special chimp tokens on bread wrappers. They have pledged one penny to the appeal for every token collected. The zoo will be offering free tickets to anyone collecting 200 or more.

On sale in the zoo are special commemorative bricks, which double as pen-holders, and carry the slogan "I helped build the Chimp House at Chester Zoo". We hope that everyone who enjoys watching the wonderful group of chimps on their island will buy a brick for £1.00.



An artist's impression of the new chimp house

Popular Pandaring

Michael Brambell reports on his trip to Tokyo

IN November 1987, the Ueno Zoo in Tokyo hosted the second World Symposium on the Giant Panda, to which they invited the directors of zoos keeping Giant Pandas, from China, Korea, Spain, France, Germany, Britain (London Zoo), the USA and Mexico, together with several scientists involved with the breeding programme. I was invited as the original keeper of the Giant Panda stud-book.

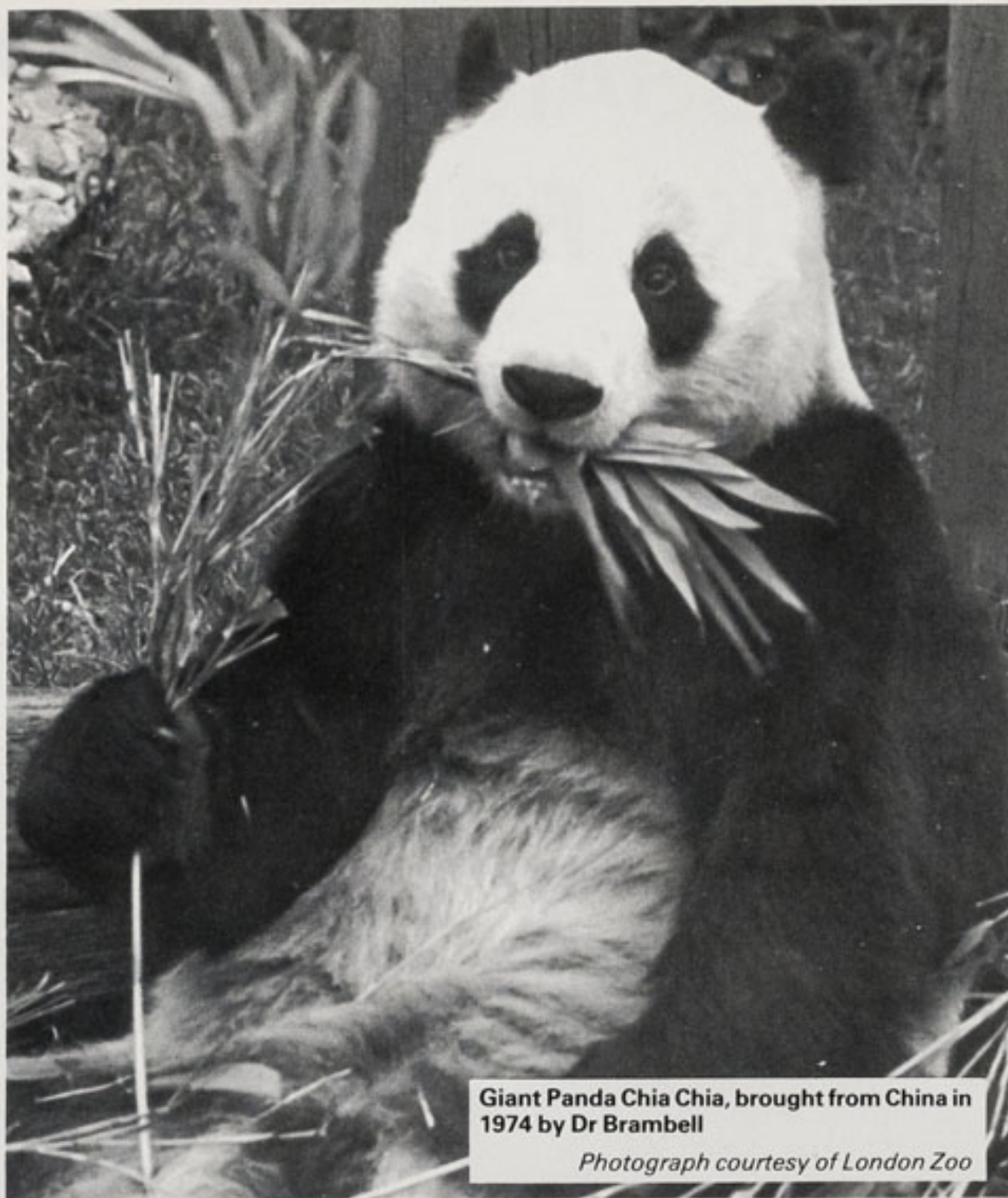
It was an interesting conference, one which did not baulk the issues facing the breeding of Giant Pandas in zoos and breeding-centres of wild reserves.

The pattern of Giant Panda presentations to zoos has been dictated by the use of them as prestige gifts at Head of State and Head of Government level. London Zoo's pandas were given as a result of the visit of Mr Edward Heath to China in 1974. This practice has resulted in Giant Pandas being sent only in pairs, and being sent when the affairs of state demanded, rather than the affairs of Giant Pandas themselves. Obviously, there was the danger that the best animals were sent when it might have been wiser to hold back, for example, on females of breeding age.

Since 1972, when the first of the current wave of Giant Pandas left China, there have been—outside China itself—several conceived pregnancies. One ended before birth, with the death of the mother; a few resulted in births which failed to survive; and there have been six successful live births—one in Madrid, to their female sired by the London male by artificial insemination; one in Tokyo; and four in Mexico.

The animals in Paris and Berlin are both males, and the pair in Washington have not bred. London's female died a couple of years ago.

The problem facing the conference was how to help the Chinese zoos to



Giant Panda Chia Chia, brought from China in 1974 by Dr Brambell

Photograph courtesy of London Zoo

improve their panda-breeding programme, now being tackled with great vigour. There are problems in China, and poaching has been a nuisance. One side-effect of poaching has been the tendency to rush into protected research centres any young female that is seen on its own. As Giant Pandas are solitary animals, one got the impression that any young Giant Panda on its own ran the risk of being taken into protective management.

The next problem was that Mexico City Zoo was intending to mate the eldest female with its father. They could not borrow another male, because they had no accommodation. They could not make room by sending one away, because the Giant Pandas are owned by the Mexican people, whom, we were told, would take a dim view of a national asset being sent abroad. (It was such "asset-preserving" thinking which kept Chi Chi and An An apart until it was really too late when London Zoo was trying to get a co-operative programme going with Moscow Zoo).

This understandable but unfortunate attitude could have been prevented if the Chinese had not *given* the animals themselves, but only the opportunity for the people in the receiving countries, including Mexico, to keep them and see them. But such arrangements—which are quite normal for species with lower diplomatic profiles—were not possible. (For instance, the Rodriguez Fruit Bats at Chester Zoo belong to the Mauritius Government, not to us.)

The long jam has been broken, temporarily, by London Zoo sending its male, Chia Chia, to Mexico. Outside help is to be provided to make the extra housing possible.

We must hope that the move is a success, and that the Mexican group can grow even bigger. But we must also hope that the Mexican people learn that co-operative breeding means a bit more than "You give—we take" all the time. Such popular "pandaring" is eventually species-defeating.

RARE RED LECHWE

IN one of the Zoo's cul-de-sacs, you will find one of the IUCN-designated rare species, the Red Lechwe. Maybe because they are tucked away in a corner, they are not as popular with visitors as they deserve to be. This area, however, suits the species admirably.

A mature lechwe stands 85 to 100 centimeters tall, and weighs 50 to 90 kilograms. They are cloven-hooved, with long, narrow claws, wide apart at the tips. Their feet give a clue to their habitat. Red Lechwe are an African species found south of the equator, on the central flood-plains, and they are dependant on these swampy marshes for food. Their widely-spread hooves are an aid in locomotion on the soft ground. Being gregarious, they live in herds, of usually ten to 15 in number, but larger herds are not uncommon. They are strong swimmers, and will readily take to water if they are alarmed; though, on dry land, they can move rapidly and are capable of jumping quite high obstacles.

Food is predominantly grass from the flooded meadows, and aquatic plants plucked from shallow water. Normally, a single infant is born on higher ground, following a seven-month gestation period, and suckled for about four months. At birth, the young weigh six to eight kilograms and tend to hide in a secluded spot for the first few days before joining the herd.

The history of our Red Lechwe goes back to 1958, and I am indebted to an article in the magazine *Black Lechwe*, written by Major G. E. Taylor for much of the early information.

Major Taylor was Senior Ranger for the Northern Rhodesian Department of Game Control. Before this, whilst a provincial game officer at Chilanga, he was asked to go to Lochinva, close to the Kafue Flats, to report on a "chila" which was taking place. A "chila" is a local event, where villagers utilise packs of dogs to chase the lechwe into deep water, where massed hunters wait to spear the animals from canoes. His investigation, following the hunt amongst

the many dead animals, revealed a newly-born calf standing by a dead female, and another dead female, with its half-born calf still alive. Major Taylor rescued both calves and took them back to Chilanga, where, with lots of patience, care and help from his wife Joan, the calves developed into strong and healthy animals.

The pair were named Laura and Larry and, in February 1958, they were presented to Chester Zoo by Major Taylor, together with a collection of other mammals, reptiles and birds.

Laura and Larry spent their first year in England in the statutory period of quarantine at Prenton. During this time, their first calf—a male—was born in January 1959. Over the next three years, the pair had three more youngsters, and the herd is now well-established.

The second in Peter Wait's series on rare or endangered species in the zoo's collection

Over 130 lechwe births have now been recorded in Chester, including five pure white calves born between 1971 and 1974. The genes to produce these calves had obviously filtered through from one of the founders to what was then the dominant male.

The *Black Lechwe* magazine picked up this rare occurrence from our own *Zoo News*, and reported the event in 1972, with the comment: "Red Lechwe are fairly uncommon in captivity and the birth of a white calf would be an unusual event, never before recorded." However, it also suggested that, should a white calf be born in the wild, it would probably not survive for long. It would be so conspicuous as to become easy prey for large cats and eagles.

Only two animals have entered the herd since the original pair came in 1958, mainly due to the difficulty of



finding unrelated stock in captivity. The first was a male from Edinburgh in 1981, and the most recent was an importation from Dvur Kralove in Czechoslovakia, which joined the herd in April 1987. The first of his calves have already been born.

One problem, which constantly presents itself at the Zoo is what to do with the surplus males. This problem is common to other species of antelope, too. Increased co-operation between British zoos has meant that some are now prepared to hold male groups which are able to be drawn on should they be required in a breeding programme. This is not in any way unnatural, as male groups of antelope and deer species occur naturally in the wild, and it also appears to work in zoos. Knowsley Park now holds our surplus males, where they look extremely well.

As with many other rare species, it is now essential to maintain lechwe in zoos. Groups are also kept at Edinburgh and Paignton in the UK, with another small group set up recently at Belfast, with animals from Chester. It is intended to set up another small group in Fota Wildlife Park in Ireland as soon as they become available.

OUR group of capybaras consists of three females and one male, living in strict hierarchy. The male and one female are dominant, the other females staying subordinate, giving way at feeding-times, etc.

When our females were due to give birth, the most subordinate female was separated off. We felt that she would need peace and quiet, away from the group, to give birth. She eventually produced a litter of five.

The other subordinate female gave birth to just one youngster, but she made no attempt to suckle her baby.

Then a strange thing happened; the dominant female attacked this new baby without warning, sending it diving into the water. Fortunately, capybaras swim well, even when only a few hours old. Mother lost interest completely, and made no move to attend to her youngster. Without mother's protection, the baby stood no chance of survival, and so I took her home to attempt to hand-rear her. I called her "Cocoa". She weighed 2½ lbs and already had a full set of teeth.



TIME FOR COFFEE- AND COCOA TOO!

Ray Packwood shares his experience of hand-rearing two young capybaras

Learning to Drink

When young animals have been with their own kind for even a few hours, they tend to resent humans trying to push rubber teats into their mouths. Cocoa was no exception. She severed the ends off three teats in as many minutes. Most of the milk went everywhere except in her mouth. Then, suddenly, she accepted the teat, and began to suckle as if her life depended upon it—as indeed it did.

I fed her with one ounce of cow's milk every two hours, from 6.00 am to midnight. After the second day, she began to scour. Cow's milk does not suit all animals, so I decided to try goat's milk, which is much easier to digest. Luckily, a neighbour keeps goats, so off I went on my trusty push-bike, bottle in hand. After explaining my unusual request, he agreed to supply a pint a day. Cocoa readily accepted the new arrangement, and showed an improvement within hours. Extra vitamins were supplied and, after the third day, she started eating solids. She also made an attempt at drinking water, but mostly enjoyed splashing about, wetting everything and everyone!

When Cocoa was ten days old, the dominant female gave birth. It was an exhausting birth. One baby was dead; the second, healthy though rather small; and the third lying on its side, unable to rise. This weak one was taken off, dried and placed in a box, with a heat-lamp. She would accept no food, and so I took her home to join Cocoa. I called her "Coffee", and, by next morning, she had recovered remarkably. She was very quiet and shy—quite the opposite to Cocoa, the extrovert!

The same procedure was used to feed her, although she destroyed many more teats. After a few days, Coffee seemed strong enough to be introduced to Cocoa, and from then on they lived together in the same box.

For daily exercise, they had a couple of hours' freedom in the living-room. This they shared with a bull mastiff bitch called "Bess" and a boxer bitch called "Amber". Both dogs were very excited with the capys, so a watch had to be kept to make sure that we did not have a squashed capy on the carpet. The capys thought that their new friends were great. They could get away with climbing on top of the dogs, biting the occasional ear—and

any other delicate part of the dogs' anatomy! The dogs were also used as stepping-stones to gain access to the furniture, where they would settle down to a well-deserved rest, after keeping the dogs amused.

Independence

By the time Coffee was three weeks old, they were drinking two ounces of milk at each feed, and consuming much more solid food. At about eight weeks, I started to dilute the milk, to wean them off. By the time they were 12 weeks old, they were fully independent and, during January, they rejoined the group in the zoo.

The capybaras proved to be very intelligent, and never once deposited any mess in the house. Whenever they were put back into their quarters, they would immediately relieve themselves, with a look of complete satisfaction!

Everyone who helped in raising these two little animals found the experience very enjoyable and totally satisfying.

FATHERS' DAY DINNER

Saturday, 18th June, 1988

A mousse of fresh Dee salmon, dressed with cucumber, on a water-cress sauce

A poached sirloin of English beef, served in a sauce of brandy and cream, and spiced with a trio of peppers

*A selection of fresh market vegetables to enhance your meal
Pan-fried potatoes, with parsley*

The Oakfield special dessert—a glazed puff pastry, filled with almond and fruit

Coffee with cream, and chocolate mints
£11.95

A wine list to complement the meal and to suit all tastes is available



AN EVENING OF BRITISH WINE

Saturday, 16th July, 1988

The Zoo's gardens will be in full bloom, providing an ideal setting to enjoy the best in British wines and food

A light, crispy pancake, filled with seafood, in a sauce of cream and lemon and garnished with summer salad

Wine: Adgestone, a medium white still wine, from Sandown on the Isle of Wight

Supreme of chicken, poached in a sauce of tomatoes, onions and mushrooms, with a hint of garlic and fine herbs

Chester potatoes and a selection of fresh market vegetables

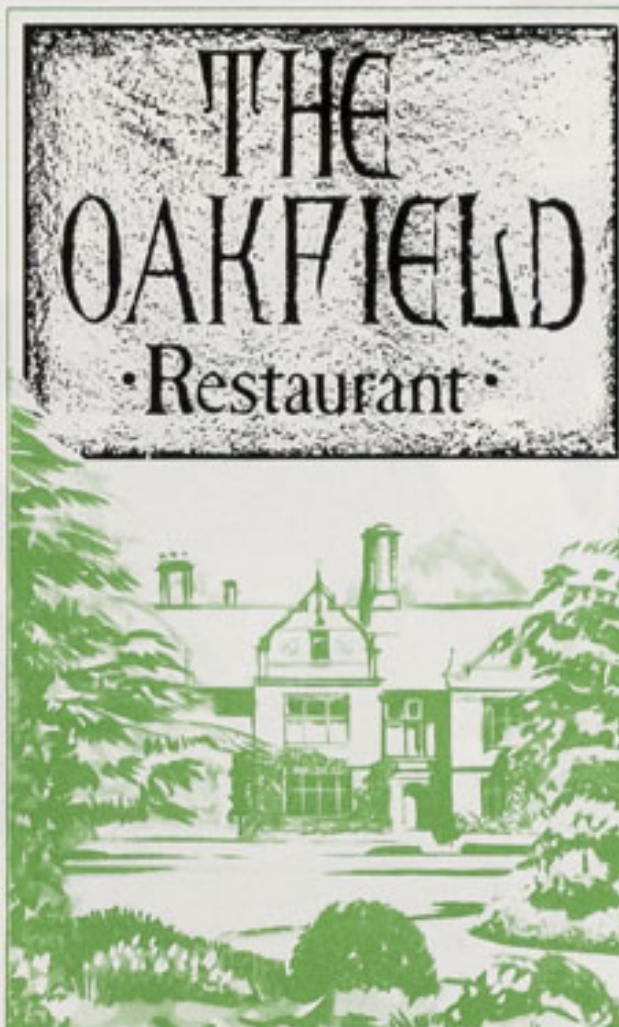
Wine: Three Choirs Rosé. A medium dry Pinot Noir rosé from the Three Choirs Vineyard, in Gloucestershire

A rich, creamy, fresh fruit ice, topped with strawberries and finished with a whirl of fresh cream

Wine: Sparkling gooseberry wine, a dry, crisp wine made from fermented gooseberries and grapes, finished with brandy, to give a fresh wine with a lasting bubble

£12.95 inclusive of wine

YOUR TABLE WAITS



THE Oakfield Restaurant re-opened at Easter, following the complete re-building of the kitchen. During the year, the restaurant will be open on a number of evenings, and there will be special menus to suit the occasion. The restaurant will open at 7.00 pm on these dates, with last orders at 9.00 pm. Please book in advance through the party office.

INDIAN SUMMER EVENING

Friday, 7th October, 1988

A menu comprising dishes from India's various regions, starting in the south, known for its obsession with crisp fried wafers called "poppadums". Four courses, finishing with an Indian sweet, popular in the north, and spiced Indian tea, to complete the meal

Traditionally, Indians do not drink alcohol with their food, but, when in England... our wine list and bar will, of course, be available

£11.95

HALLOWE'EN

Monday, 31st October, 1988

After a witchy welcome and a glass of spine-chilling potion, our shadowy oak-panelled dining-room will be the perfect setting for your four-course devilish dinner

£11.95

Later dates for your winter calendar:

BEAUJOLAIS NOUVEAU EVENING

Thursday, 17th November, 1988

Join us once more in welcoming the Beaujolais Nouveau. Our four-course French dinner includes two glasses of this celebrated wine

ST ANDREW'S DAY

Wednesday, 30th November, 1988

To celebrate this occasion, we will be offering food for the true Scottish gourmet

Details of these two entertaining evenings available from our Party Sales Office—Telephone 380280

CHRISTMAS DINNER

Following popular demand, the Oakfield Restaurant will be opening most evenings—as well as lunch-times—throughout December, for private functions and individual bookings



EVENING GROUP BOOKINGS FOR ANY OCCASION

FOR groups of 20 or more, we have new, tempting supper menus, priced from £3.50 to £5.00, and served from 5.30 to 7.30 pm.

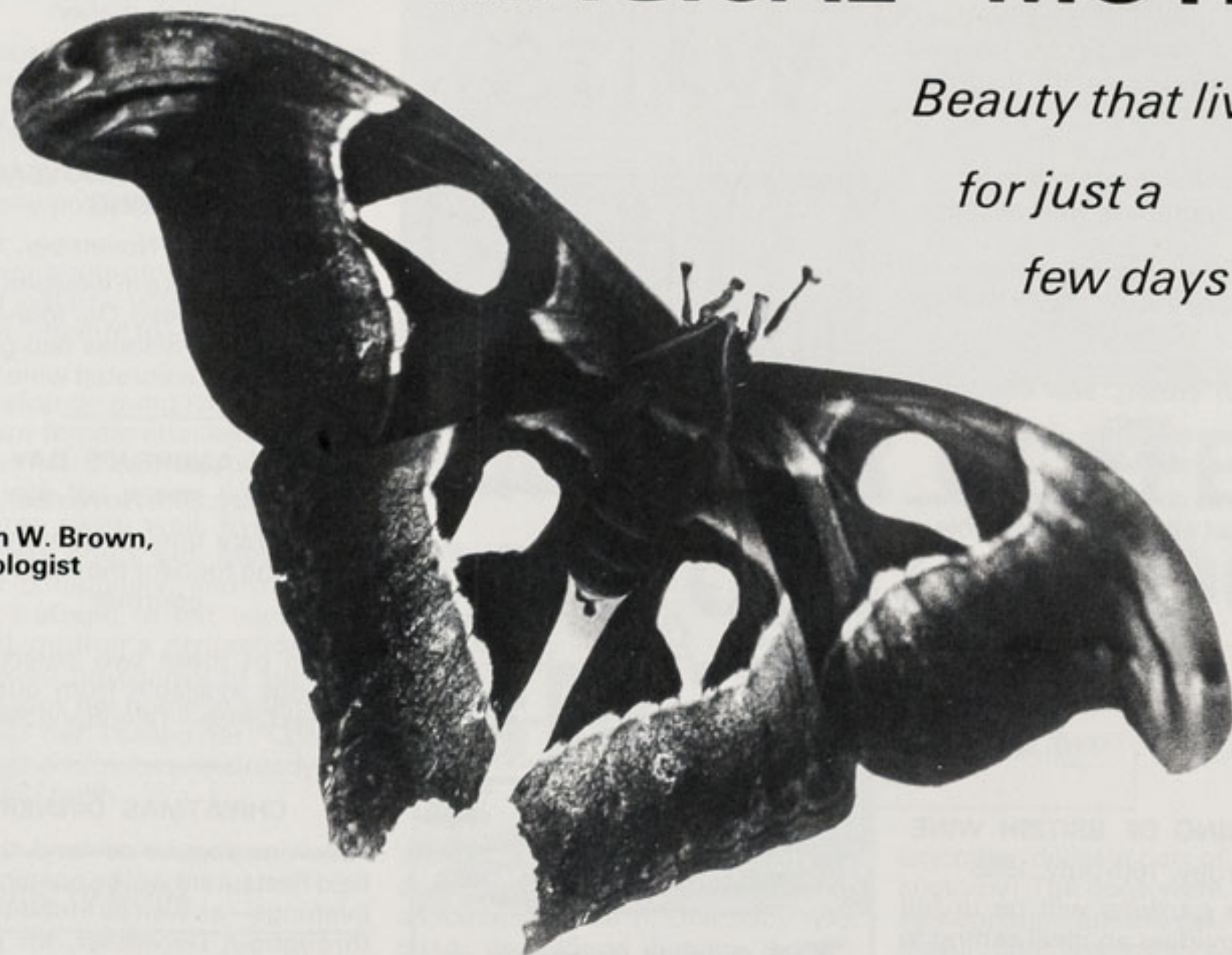
Advance bookings are essential, and those entering the zoo after 4.00 pm during the summer months will be given generous concessions on normal admission charges. During the winter months, there will be no zoo admission charge for Oakfield diners entering the zoo after 4.00 pm.

Our wedding and function menus are available for special occasions.

MAGICAL MOTHS

*Beauty that lives
for just a
few days*

By Keith W. Brown,
Herpetologist



INSECTS can be difficult subjects to exhibit, as most are nocturnal and spend the day hiding away, resting. Moths are no exception but, in the case of the large and very spectacular species, such as the Silk Moths and Moon Moths, we can use their natural behaviour to make an excellent exhibit. Whilst resting, these large moths stay motionless, with their wings open, relying on their colouration to blend in with their surroundings or, in the case of the Indian Moon Moth, to frighten off any would-be predators, using the "eye-spots" on their wings to give the impression of a much larger and different animal.

We decided to obtain the following three species: the Atlas Moth (*Attacus atlas*), the largest species, with a possible wing-span of up to 30 centimetres (females); the Indian Moon Moth (*Actias selene*), so-called because of the moon-like markings on the wings, with a wing-span of up to 12 centimetres; and the Robin Moth

(*Hyalophora cecropia*), with a wing-span of up to 14 centimetres. Both the Atlas Moths and the Indian Moon Moths are found throughout South East Asia, and the Robin Moth is found throughout the USA, where it is the largest species of butterfly or moth.

Our specimens arrived in pupa form, wrapped in protective silk cushions that the caterpillars had spun inside envelopes of dead leaves, before their final moults as caterpillars. To aid their metamorphosis, we placed the complete pupae on a layer of damp vermiculite in a sandwich-box, with a fine net suspended over them, for the emerging moths to climb on to to expand and dry their wings. The complete set-up was housed at the rear of the insect display, where the ambient temperature is 26 to 28 degrees Celsius.

The first moth—a female Atlas Moth—emerged after three weeks, and

the others followed at two- to three-day intervals and, at the time of writing, only two of the original 12 specimens are yet to emerge. As with most things in life, there is some good news and some bad news—so, first the good news: all the moths that have emerged have done so perfectly, with no deformities whatsoever.

Now the bad news: adult Silk Moths and Moon Moths do not have any mouth parts, and therefore cannot eat. Due to this, their life-expectancy is only a matter of days and, during this time, they must find a mate and reproduce.

Our moths emerged females first, and the only possible fertile eggs that we may still have will be from a pair of Atlas Moths. Nevertheless, now we know that we can successfully emerge these beautiful creatures, we can concentrate on one species to enable us to establish our own self-sustaining colony.

JUN NEWS



Junior Members' Field Trips & Meetings

These are the events which have been arranged for the forthcoming year for the Junior Members. Please make sure that all the dates are booked on to your calendar!

JUNIOR MEMBERS' BAZAAR Sunday, 31st July, 1988

Full details about what we would like you all to help with for the Bazaar in July will be issued in a separate note, but please try to keep this day free to visit with your families—the Bazaar can only be as successful as you wish to make it. *Everyone welcome.*

BARBEQUE AND MOTH-TRAPPING SESSION Saturday, 20th August, 1988

The suggestion to skip this event this year was greeted with horror at the Junior Members' Conference, so here it is again—one of our most popular outings. We will meet in the zoo during the evening and set up the live moth traps, hopefully assisted by our entomologist friend Jon Delf, and, whilst waiting for it to get dark, there will be hamburgers and hot-dogs from our barbeque. If the weather is fine, this will be held on the Jubilee Lawn. **Over tens** invited, as this will be a late night. We will meet at the Jubilee Café at 7.00, ending around 10.00

VISIT TO A TROUT FARM 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 am, returning around 3.30/4.00 pm. **Over tens** are invited.



Juniors are shown how to make the plaster of paris mixture, having selected a footprint and surrounded it with a plastic box to contain the liquid mixture. Having been shown what to do, the Juniors did the whole process themselves. *Messy!*

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 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 am, returning around 4.00 pm. **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 can be seen from the special "hides".

We will leave the zoo at 9.30 am, returning around 4.30 pm. **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 pm and end around 10.00 pm.

Fuller details of the 1989 meetings in the next issue, but make a note of these dates:—

THE CONTACT SESSION

Saturday, 21st January, 1989

THE JUNIOR MEMBERS' CONFERENCE DAY

Saturday, 18th February, 1989

TRACKS AND SIGNS

Saturday, 8th April, 1989

HILBRE ISLAND

Date to be confirmed according to the tide timetable

DAY WITH THE KEEPER

Saturday, 24th June, 1989

FOSSIL-HUNTING EXPEDITION

Saturday, 22nd July, 1989

PLEASE NOTE:—

Bookings to be made for **all** events. Please ring me 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/food and 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 to keep up to date.

Penny Rudd
Junior Members' Club

Arrivals ○ Births ⊕ and ⊕ Hatchings ⊕

FROM 1st FEBRUARY, 1988 TO 30th APRIL, 1988

Mammals

0.0.2	Rodriguez Fruit Bat (<i>Pteropus rodricensis</i>)	Born
5.3	Blackbuck (<i>Antelope cervicapra</i>)	Born
1.0	Guanaco (<i>Lama guanicoe</i>)	Exchanged
0.3	Red Lechwe (<i>Kobus leche</i>)	Born
1.0	Sealion (<i>Zalophus californianus</i>)	Exchanged
1.2	Paca (<i>Cuniculus paca</i>)	Purchased
2.2	Dexter Cattle (<i>Bos taurus</i>)	Purchased
1.0	Congo Buffalo (<i>Syncerus caffer nanus</i>)	Exchanged
1.1	Tree Shrew (<i>Tupaia glis</i>)	Received
0.0.1	Capybara (<i>Hydrochoerus hydrochaeris</i>)	Born
0.0.11	Ring-tailed Lemur (<i>Lemur catta</i>)	Born
0.1	Père David's Deer (<i>Elaphurus davidianus</i>)	Born
1.2	Ankole Cattle (<i>Bos taurus</i>)	Born
0.0.1	Patas Monkey (<i>Erythrocebus patas</i>)	Born
0.0.2	Ruffed Lemur (<i>Lemur variegatus</i>)	Born
0.0.1	White-fronted Lemur (<i>Lemur fulvous albifrons</i>)	Born
0.0.1	Margay (<i>Felis wiedi</i>)	Born
0.1	Bactrian Camel (<i>Camelus bactrianus</i>)	Born
0.1.1	Reindeer (<i>Rangifer tarandus</i>)	Born
0.1	Bison (<i>Bison bison</i>)	Born

Birds

0.0.15	Emu (<i>Dromaius novaehollandiae</i>)	Hatched
0.0.1	Cereopsis Goose (<i>Cereopsis novaehollandiae</i>)	Hatched
1.1	Blue/Gold Macaw (<i>Ara ararauna</i>)	Received
1.0	Red-fronted Macaw (<i>Ara rubrogenys</i>)	Exchanged
2.0	Yellow-faced Parrotlet (<i>Forpus xanthops</i>)	Received
2.2	Virginia Cardinal (<i>Richmondia cardinalis</i>)	Purchased
1.0	Great Horned Owl (<i>Bubo virginianus</i>)	Exchanged
0.0.1	Crowned Plover (<i>Vanellus coronatus</i>)	Hatched
1.1	Crowned Plover (<i>Valellus coronatus</i>)	Received
0.0.1	Red-backed Mousebird (<i>Colius castanotus</i>)	Hatched
0.0.4	Hawaiian Goose (<i>Branta sandvicensis</i>)	Hatched
1.0	Spreo Starling (<i>Spreo superbus</i>)	Exchanged
2.2	Pink-necked Green Pigeon (<i>Treron vernans</i>)	Purchased
1.0	Emerald Dove (<i>Chalcophaps indica</i>)	Purchased
1.0	Channel-billed Toucan (<i>Ramphastos vitellinus</i>)	Purchased
0.1	Amethyst Starling (<i>Cinnyricinclus leucogaster</i>)	Purchased
0.0.4	Emerald Starling (<i>Lamprotornis iris</i>)	Purchased
0.0.10	Humboldt's Penguin (<i>Spheniscus humboldti</i>)	Hatched
0.1	Palm Cockatoo (<i>Probosciger aterrimus</i>)	Exchanged
1.1	Thick-billed Parrot (<i>Rhynchopsitta p. pachyrhyncha</i>)	Received
0.0.1	Fair Bluebird (<i>Irena puella</i>)	Hatched
1.1	Red-billed Magpie (<i>Urocissa erythrorhyncha</i>)	Received
2.0	Mountain Witch Dove (<i>Geotrygon versicolor</i>)	Received
0.0.2	Diamond Dove (<i>Geopelia cuneata</i>)	Hatched
0.0.1	Palawan Peacock Pheasant (<i>Polyplectron emphanum</i>)	Hatched



"Captain Nemo", Californian sealion (see page 5)

Reptiles

1.0	Indian Python (<i>Python molurus bivittatus</i>)	Received
0.0.4	Argentine Horned Frog (<i>Ceratophrys ornata</i>)	Received
1.0	Corn Snake (<i>Elaphe guttata guttata</i>)	Exchanged
1.2	Herman's Tortoise (<i>Testudo hermanni</i>)	Received
1.0	Greek Tortoise (<i>Testudo graeca</i>)	Received
0.0.10	Leopard Gecko (<i>Eublepharis macularius</i>)	Hatched

Invertebrates

0.0.4	Jungle Nymph (<i>Heteropteryx dilatata</i>)	Purchased
0.0.10	Jewel Beetle (<i>Sagra bouqueti</i>)	Purchased
0.0.4	Atlas Moth (<i>Attacus atlas</i>)	Purchased
0.0.4	Robin Moth (<i>Hyalophora cecropia</i>)	Purchased
0.0.4	Indian Moon Moth (<i>Actias selene</i>)	Purchased
0.0.4	Mormon Swallowtail Butterfly (<i>Papilio palytes</i>)	Purchased
0.0.24	Leaf Insect (<i>Phyllium sycthe</i>)	Purchased
0.0.2	Thailand Black Scorpion (<i>Heterometrus spinifer</i>)	Purchased

Aquarium

Burton's Mouthbrooder (<i>Haplochromis burtoni</i>)	Bred
Red-hump Geophagus (<i>Geophagus hondae</i>)	Bred
Australian Rainbow Fish (<i>Melanotaenia maccullochi</i>)	Bred
Cockatoo Cichlid (<i>Apistogramma cactuoides</i>)	Bred
Whip-tailed Catfish (<i>Sturisoma aureum</i>)	Bred
South African Clawed Frog (<i>Xenopus laevis</i>)	Bred