

Chester
ZOO
Life



SUMMER 1993

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Grant Aid

I am very happy to be able to tell our readers that the zoo has been given a grant by the European Community towards its new entrance and the related work required for a replacement of our now very old "sewage farm" with a modern, more euphemistically named, "effluent treatment plant." The grant is for £312,000, being the maximum level at 45% of total costs.

We have also been promised a further £100,000 towards the building of the new shop at the new gate site, by Ravensden, the suppliers of a fair proportion of what we retail in the shops.

We are very grateful indeed for the two grants, which will most certainly "help us to get there more quickly" – the slogan we are attaching to our needs in order to implement the update of the masterplan, "Towards 2000."

Bird News

Visitors to the zoo in recent weeks will be aware that the magnificent new aviary for Mauritius Kestrels has been completed. A pair of Kestrels arrived recently from Jersey Zoo. These came from the government aviaries on Mauritius where they were once held together but recently have proved less compatible. Hopefully in our large aviary we may be able to get these birds together again – if not new partners may have to be sought.

The conversion of the polar bear area and the adjacent pond area, which tended not to be used for anything other than an overflow when the polar bear pond got too full, is going apace. It will be the largest aviary by far in Chester Zoo, and shows every sign of being a truly magnificent exhibit. We hope the European Black Vultures, and

other species which can live in harmony with them, will use the aviary to the full, and get on with their job of reproducing their own kinds.

Some of the old owl aviaries are being rebuilt, so there really has been a lot going on.

Island Home

But it has not been all birds! After an unsuccessful attempt to put our De Brazza monkeys on the middle island in the canal, (De Brazza's take to swimming with much more alacrity that we had previously been led to believe!) a pair of ruffed lemurs were put on the island. They immediately began to declare it their own by climbing to the top of the trees and bellowing out their distinctive, though rather raucous calls. With the Oakfield office windows open on warm days, it really is wonderful to hear them calling!

Noah's Ark

Our other addition has been the conversion of our under-used flat-top trailer into a permanent float for Lord Mayors' Shows and the like, in the form of a Noah's Ark. (See photographs on page 4.) Modesty prevents me from proclaiming too stridently that it was my idea, excellently interpreted into a working plan by Ken Roberts, Projects Engineer. The interpretation of this plan into reality was undertaken by Paul Lindop, Joiner, and Derek Hitchinson, Supervisor of the Employment Training unit at the zoo. It was finished with superb painting by Les Doyle, Supervisor of the Employment Training painters at the zoo.



◆ Michael Coupe receives a gift of artists materials from Curator in Chief, Dr Gordon McGregor Reid.

Well done!

Congratulations to our gardeners and the four other Cheshire Gardens who combined to produce a Silver Medal winning exhibit at the Chelsea Flower Show (see picture, page 5).

Congratulations, too, to Adam Britt, Monkey House Keeper, for gaining his M.Sc. from the University of Liverpool for his work on environmental enrichment of Celebes Macaques.

Farewells

I want to send the good wishes of everyone at the zoo to two recent retirees.

Michael Coupe, our Animal Information Officer, took early retirement after 30 years service with the society. Michael held several positions during his years in the zoo, but his main interest has always been in the bird section, and he will doubtless be spending some of his extra free time out in the countryside with his binoculars! Michael will still be doing some freelance work for the zoo, so we hope to see him often.

George Bellis I'm sure had no idea when he came to the zoo, that he would spend the next eight years working here! He came under the Manpower Services Commission, on a short term as a consultant, following his retirement as a Midland Bank Manager. His services to the Education Division became so valuable, that he was persuaded to turn short term into long term, and he will be very much missed.

Michael R. Brambell



◆ Dr Brambell presents George Bellis with a box of wine glasses.



MEMBERS' MEETINGS 1993/94

2 October 1993 - 2.30 pm in the Lecture Hall
Mr M Vollers, Anglesey Sea Zoo - "Exhibiting Local Marine Life"

6 November 1993 - 2.30 pm in the Lecture Hall. Miss Samantha Hillcox - "The Biogeography & Ecology of the Common Brushtail Possum in South-Western Australia". Samantha received a N.E.Z.S. Scholarship for this project.

11 December 1993 Members' Christmas lunch in Oakfield Restaurant at 12 noon. Ring Maureen (0244 380280 ex 203) to reserve your place for the Christmas lunch - £12.75 adults,

£7 children (3-11 years).
Talk by Dr Gordon McGregor Reid, Curator in Chief entitled "Wildlife of the Sahara Desert" will start at 2.30 pm in the Lecture Hall.
Members are welcome to come to the meeting without taking lunch.

15 January 1994 - 2.30 pm in the Lecture Hall
Mr E P Rogers - "Birds as Flying Machines"

12 February 1994 - 2.30 pm in the Lecture Hall
Mr & Mrs S J Chaplin - "India - Land of the Tiger and other endangered species".

March 1994 - President's evening. Date to be announced.

16 April 1994 - 2.30 pm in the Lecture Hall "A Zoo Review" by the Director, Dr M R Brambell

May 1994 - AGM - 2.30 pm in the Lecture Hall. Date to be announced. Members are reminded that a charge of 50p per meeting will be made at the door to offset expenses for bringing speakers and towards defraying the costs of maintaining the meeting rooms.

Tea and biscuits will be available at meetings at no extra cost.

ADOPTERS' DAYS 1993

The two dates for this year's annual "Adopta" days are Sunday 10 October and Saturday 16 October.

Your invitations have been issued with this magazine - come and join us for a day of fun at the zoo - it's our way of saying "thank-you" to all our adopters for continuing to support us. As usual, keepers will be available to answer your questions, and lots of other activities are planned.

Many Thanks

The Society is grateful for two recent donations.

Amber Plastics Ltd of Chesterfield have given a water trough to the Children's Farm. Widnes Plant Hire have donated some splendid climbing frames for use in the Monkey House.

GOING DUTCH

Maria Warrington, who organised the very successful Members' weekend trip to Edinburgh a couple of years ago, has plans to go further afield next year. She recently visited Rotterdam Zoo, thoroughly enjoyed it, and decided to once again take on the task of organising a trip.

This is a long advance warning to give you time to make plans! The trip

will take place from Monday 2 August - Saturday 6th August 1994. The channel crossing will be via Hull/Rotterdam, to avoid long overnight coach journeys.

Costs are still to be confirmed. Transport and trips will be in the region of £200, plus hotel costs.

Further details in the next magazine.

WILDLIFE GARDENING

Friday 12th November:
7.30 pm.
Chester Town Hall.
"From Global Warming to Wildlife Gardening."

An illustrated lecture by Professor Chris Baines (Presenter of the TV series, "Wildside of Town")

This lecture is presented by the Chester Environmental Forum, and is Chaired by Zoo Council Member, Margaret Parslow.

Tickets are £2.00 and will be available from the City Council Offices from late September.



The prizewinners for the first two months of our newly-launched One Hundred Club are:

May:	£100	Mr. N. G. Hawkes.
	£50	Mr & Mrs D. Minion.
	£50	Mr. W. Morrison.
June:	£100	Mr E. A. Cobb
	£100	Dr David Cooke
	£50	Mr Clifford Perry
	£50	Mrs Mavis Bowden.

All prize winners are notified by post.

Membership to the One Hundred Club is still invited. Please contact Alan Sykes or Maureen Allsopp if you wish to participate. All new members will be immediately eligible for the monthly prizes of £100 and £50, and for the major prize of £1,000 after 12 months.

ZOO REVIEW

DIDDYMAN MEETS THE JUMBOS!



"Be a Smiley Person" - that was the theme for National Dental Week this year. And who better to launch it than Ken Dodd! Ken called on the elephants to help him get across the message that teeth should not be neglected. He judged a children's poster-design competition, and presented the top prize - an elephant adoption - to the winner.

◆ "Open wide - this might tickle a bit!"

NOAH ONCE HE BUILT AN ARK ...

... but this time he had some help from zoo staff and the Employment Training team!

Our splendid Chester Zoo Ark received a lot of admiration on its maiden voyage in the first Chester Lord Mayor's Procession in May. A few weeks later, it joined the Liverpool

Lord Mayor's Procession, and in June it was visited by the many thousands who attended the Cheshire Show at Tabley.

◆ Below, left: The "animals" ready to board the ark. Recognise the very formally dressed Mr Noah?

◆ Right: The ark on parade in Liverpool City Centre.





SILVER SUCCESS AT CHELSEA

◆ A section of the award winning garden in the Chelsea Marquee.

The Cheshire Gardens Consortium – Chester Zoo, Arley Hall, Ness Gardens, Tatton Park and Jodrell Bank – won its third Silver Medal at the Chelsea Flower Show in May. It was the third time the group have exhibited at Chelsea – and the third time they have scooped a silver medal.

The entry was co-ordinated by John and Yvonne Ellis, together with the five head gardeners. This year's theme was the "Romantic Garden" and it attracted a lot of attention because of the inclusion of a unique "rootery" – a Victorian idea, featuring the root patterns of plants.

ZOO FEDERATION AWARDS FOR CHESTER ZOO

Chester Zoo has won more awards than any other collection in the Federation of Zoos 1993 Awards.

In the section for "Significant Advances in Husbandry and Welfare," Chester was awarded for the chimpanzee house; the Ring-tailed lemur island exhibit; and for the use of environmental enrichment techniques with primates, particularly Salawesi black macaques.

Chester also received four awards in the section for "Sustained breeding over a number of generations and as part of a recognised management programme." These are for chimpanzee; Ring-tailed lemur; Red lechwe and Blue-eyed cockatoo.

Under the heading "Award for the most imaginative, innovative and effective education project" Chester received a commendation for the puppet theatre.

INTO AFRICA

It was sad to say good-bye to Vince Smith, a senior keeper in the ape section, earlier this year. In previous issues of Zoo Life, Vince has written of his experiences helping the Jane Goodall Foundation with the rehabilitation of chimpanzees in Brazzaville.

As a result of this work, Vince has been offered the job of setting up the Sweetwater's Chimpanzee Rehabilitation Centre in Mount Kenya, and he left to take up the new post at the end of May. His wife Audrey and 2 year old son Oliver will be following shortly.

The centre will care for chimps that have been confiscated or mal-treated from all over Africa. It will be part of the Lonrho-owned sanctuary for elephants and rhinoceros.



Our annual draw this year is for a very special cause. For several years, The North of England Zoological Society has awarded annual studentships, to allow undergraduates to carry out a specific area of relevant research. The Zoology studentship award is for £1,500 and the Veterinary award is for £2,000. Last year, financial constraints meant that these awards were not made. We hope that the funds from our raffle this year will be able to fund two awards. It would be wonderful to raise enough for three!

Our first prize is a full set of the Junior Encyclopedia Britannica, donated by Encyclopedia Britannica International – a wonderful gift of knowledge for any youngster.

Second prize is two tickets to the award-winning Granada Studios Tour in Manchester, together with an overnight stay in Manchester's newest luxury hotel, the Victoria and Albert. So even if you don't live close enough for a day trip to this fascinating attraction, you will be able to take advantage of this prize.

GRAND DRAW

Ascott's Camera Centre in St. Werbergh Street, Chester, have donated a superb set of binoculars. They are 8 x 40 Bushnell "Instafocus" easy-focus system, and come complete with carrying case, caps and straps.

In addition, to round out our prizes, we have a Panasonic 14" portable colour television and a Technics personal CD player. So please send back your ticket stubs by the end of September. The draw will be made at the Members' Meeting on 2nd October.

The subject for the studentship has to be related to conservationally important animals, and preference is

given to projects involving species normally kept in zoos. They can involve proposals on husbandry or in the wild.

For the Veterinary studentship, the subject must be related to the veterinary care of animals in the zoo, preferably where the subject matter can be applied to questions of conservational significance.

Applications for the studentships will be invited in the Spring of 1994, and should be directed to Dr Roger Wilkinson at the zoo. They are open to undergraduates, as part of a first degree.

All the profits raised in the raffle this year will be used for this purpose. So in addition to the chance of winning one of five major prizes, you will know that your contribution is helping with conservational research. With the educational cutbacks in spending to-day, it is impossible for many students to have the chance of developing their research, particularly when it involves travel.

So please – be as generous as you can!

WHAT ARE ZOOS FOR?

By Curator-in-Chief Dr Gordon Reid.

My wife Sally and I participated in a lively debate on this important question in May. The debate was organised as a dinner meeting held by the CIBA Foundation at their grand premises in Portland Place, London.

The debate followed on from a weekend symposium held earlier in the year and attended by Nick Ellerton, Curator of Mammals, on: "The Future of Zoos: Arks or Distractions?"

The Foundation which hosted this latest meeting was established in 1947 to promote and popularise the study of all branches of science and to communicate with the media. As their Director, Dr. Derek Chadwick, puts it: "We aim to catalyse a kind of international traffic in ideas."

The meeting was attended by many famous zoologists, including Sir David Attenbrough, Dr Neil Chalmers, Director of the British Museum of Natural History, and Will Travers, who represented the Zoocheck organisation, which is generally opposed to zoos.

Colin Tudge (pictured right), the well known science writer and author of the controversial "Last Animals at the Zoo" (recently published by Century Hutchinson) kicked off the debate with a brilliant after dinner speech which carefully explained the vital function of zoos in the conservation of animal



species, mainly through captive breeding. Colin – no stranger to staff at Chester Zoo, where he has made a major contribution to improving the information signs – has been instrumental in shaping the conservation policy at the Zoological Society of London and he now sits on

the London Zoo Council, along with Chester Zoo's Director, Dr. Brambell.

Certainly the message that came across clearly during this animated evening discussion is that zoos must develop a stronger role in promoting field conservation programmes if they are to retain public support.

Curator in Chief, Dr Gordon McGregor Reid, experiences that moment familiar to all parents – when your offspring asks the question you can't answer!

SEPARATING THE SHEEP...

"Sheep?" enquired my young son Alexander while leaning over a pen in the childrens' zoo at Chester. "No, not sheep, goats!" I confidently replied. "What's the difference?" persisted Alexander, after pausing for thought. "I mean, they look just like the sheep in one of my picture books." My initial confidence started to wane. Each obvious difference between sheep and goats that sprang to mind, such as 'wooliness' and 'horn length', I knew could be contradicted – particularly when one considered the many different wild kinds of sheep and goats. "Well, I am not at all sure", I finally admitted, "... but lets find out."

Research

A bit of rummaging in the excellent Chester Zoo Library run by Lynn Wilkinson soon shed some light on the problem. Wild kinds of goats and sheep evidently first became domesticated by humans about six to eight thousand years ago in the Near East. They quickly became very useful to these early human societies, who were in the process of changing from a hunting to a farming lifestyle. Why did they become so important? Firstly, goats and sheep are generally very hardy animals that can survive in areas where the soil is poor and the vegetation sparse. I well remember working out in Nigeria on the fringes of the Sahara desert and being amazed at the ability of domestic goats and sheep, herded by Tuareg tribesmen, to find sufficient food in a barren wasteland and to cope with a severely limited water supply.



◆ Nigerian Argungu – in ceremonial dress. Secondly, goats and sheep are important to humans because they usually remain remarkably healthy with



◆ Definitely Sheep!

the minimum of attention; and they provide milk, cheese, meat, wool and hides (the much-prized 'Morocco' leather used in high quality bookbinding comes from desert goats). The northern Nigerian goats which I encountered tend to be brown and stocky and they are sometimes used for ceremonial purposes (see the picture, left, of one with an earring!). By contrast, the sheep in this region are very long-legged with pure white hindquarters which are sharply separated from a jet black front part. A herd of these sheep seen from a distance through dust creates a curious 'chess board' type of illusion. In the town and village areas goats and sheep can be seen rooting around in rubbish tips and retrieving newspapers and paper bags which are consumed with great relish. Not all that surprising really, when one considers that paper is made from cellulose: the same stuff from which grass and other plants are mainly made. Their ability to make use of almost any plant life that comes their way can be as much of a nuisance to foresters and farmers as a blessing. Certainly, protective 'goat baskets' are essential for any new plantation of

trees or shrubs. Watch out if a flock of sheep or a herd of goats ever gets into your garden!

What's the difference?

But, as Alexander frankly pointed out to me in the library, I digress. The key issue is how does one separate sheep from goats? What are the points of similarity and what are the main differences? In trying to answer this question, the first thing to know is that both sheep and goats belong with cattle and antelopes in the extended family of grazing and browsing hoofstock termed 'bovoids'. This is by far the largest group of cloven-hoofed mammals and as well as sheep and goats it contains about 122 other kinds, including cattle (both domestic and wild species), bison, musk ox and various antelopes, such as pronghorn, eland, kob, oryx and gazelle. The majority of bovoids graze on grass, herbs, flowers and other low vegetation, but some are browsers reaching up into bushes and trees to feed on leaves, berries and seeds. Horns are usually present in the male

... FROM THE GOATS



◆ Cashmere Goat

and quite often in the female too. These are not shed seasonally (as in the case of the skin-covered antlers found in the deer family) and, barring accidents, they remain fixed for life. These horns have a compact outer sheath made of a substance called keratin (the same sort of material from which human hair and fingernails are made). Within the bovoids there is a smaller group of closely-related 'goat-antelopes' or caprins, to which sheep and goats belong. They favour steep hillsides and are especially well-represented in the Himalayan mountains.

Mouflon or argalis?

The exact relationships and classification of the 13 genera and 26 or so species of goat-antelopes are still being investigated today. This means that scientifically exact definitions of 'goat' and 'sheep' are, for now, unavailable. Generally speaking, goats belong in the genus *Capra*, with most domesticated breeds (such as those in the childrens' zoo) probably being descended from the wild parsang

(*Capra aegagrus*). Similarly, many sheep belong to the genus *Ovis* with farm breeds being derived from more than one wild species; and which may include little known creatures with curious names such as mouflon (*Ovis musimon*) and argalis (*Ovis ammon*). However, some taxonomists argue that the mountain ibex (*Capra ibex*) is the wild ancestor of the domestic Cashmere goat. Also, the different kinds of wild sheep need not necessarily be closely related to each other and some have been classified in separate genera, e.g. Barbary sheep (*Ammotragus lervia*) and Blue sheep (*Pseudois nayaur*). Apart from certain fine differences in anatomy, there are several ways to separate sheep from goats; although these differences are not general. Compare, for example, Bighorn sheep (*Ovis canadensis*) with Mountain goat (*Oreamnos americanus*), two species which occur in the same areas of the Rocky Mountains of North America. They cope with the same chilly weather and eat similar food. Here, the goats' hair is white and long, while the sheep has a short brown coat. The goat has short, black, sharp horns, while the sheep has long, brown, curved,

blunt-ended horns. The goats do not tend to fight very much – but, when they do, the bouts are brief and violent and blood is often drawn. Sheep fights are relatively mild affairs, albeit with a bit of head-banging not seen with goats. Sheep fights can last for some time but they rarely result in serious casualties. Evidently, the lifestyle of the Mountain goat centres round the defence of a territory and the scarce food which it contains. By contrast the Bighorn sheep are drifters, moving from place to place when food becomes scarce or covered in snow.

Cashmere for cardigans

In a recent attempt to separate the sheep from the goats, the distinguished biologist M. L. Ryder has made a special study of their hair. For example, the wool from the undercoat of the Cashmere goat is extremely fine and, apart from insulating the animal from the cold, it is used to make soft pullovers which are often very expensive to buy. There are often large differences between species in the thickness and pigmentation of hairs, as well as consistent differences between the inner and outer layers of the fleece. Seen under a microscope, the central core of hair in sheep and goats is formed in a criss-cross pattern, and this is not characteristic of other bovoids. Interestingly, Dr Ryder was asked to examine the skin of an animal from the Himalayas which was believed to belong to that curious and probably mythical beast the 'Yeti'. A microscopic examination of the hairs revealed that, in fact, it belonged to the tahr (*Hemitragus jemlahicus*), a primitive species thought to be a link between sheep and goats. Anyway, having by this time found out quite a lot about sheep and goats, Alexander and I returned to the childrens' zoo to take another look. "What are the two little tassels for that I can see on the neck of each goat," asked Alexander. "Er... I think we should put that question to the keepers." I quickly replied.

Photo: Gordon Reid

Photo: Edward Parker



Christmas in Borneo

◆ School bus

Christmas in Borneo, with the chance of seeing wild Orang-utans and Proboscis Monkeys, wondering at the array of pitcher plants, fleeting glimpses of Hornbills and Gibbons, a climb up Mount Kinabalu and two days on a coral island, was just too much to resist.

All this was made possible by the kind organisation of Liz Bennett, a research scientist with Conservation International, part of the New York Zoological Society. Liz, a long standing friend of my travelling companion Caroline Harcourt, is based in Malaysia, and she joined us for part of our holiday and to spend Christmas with us.

Our itinerary would take us on several internal flights, many boat trips, and a reasonable amount of driving, all in an attempt to absorb as much of the character and biodiversity that this beautiful country has to offer.

Sabah and Sarawak (Eastern Malaysia) occupy one third of Borneo. The climate is wet equatorial with forest cover of 39% and 65%. Timber remains one of the largest forms of income for these two states. Logging roads were all too clear when flying over the country, also noticeable were the hundreds of thousands of acres of palm oil plantations.

Kuching

Having arrived in Kuching, the capital of Sarawak, our first call was the

**Words and photographs by
Nick Ellerton,
Curator of Mammals.**

museum followed by a rapid shopping trip to provision ourselves. Kuching as a city is beautiful with much English influence remaining from the days when the Brooke family ruled this country for three generations.

Liz had insisted that we stay for a night in a Longhouse some 80 miles from Kuching in order to absorb the lifestyle of the Iban people before this traditional way of life disappears. Liz had stayed in this Longhouse 18 months prior to our visit and we were to be the first European guests since her visit. Since it is traditional to provide gifts for the Iban's kind hospitality, these were collected in Kuching in addition to three large bottles of 'Sahib' brandy which were essential gifts.

We boarded two canoes with outboard engines mounted at the back. These were loaded with our rucksacks and we motored over Batang Ai Lake. The lake, which is 84 sq Kms was made in 1985 to provide electricity for Kuching. Having crossed the lake, we made our way up a small river for some two and a half hours to the Longhouse. Our journey was halted for

a lunch break which included the chickens I had been looking after and watching in our canoe! Very good they were indeed, spit roasted over a small fire and served on plates of leaves with rocksalt and hot chilli. This was washed down with a deceptively strong distilled rice spirit, somewhat like sake.

Much of the countryside had been cleared for shifting agriculture, pepper being an important cash crop, and whilst one expected the odd glimpse of Hornbills or Long-tailed Macaques, there was little wildlife, all had long since been eaten and my hosts explained that they now had to walk for two or three days into the forest in order to find game of any quantity. The Iban, unlike the Penang, are sedentary and rely heavily on agriculture. True hunter-gatherers such as the Penang heavily hunt an area and then move on, thus allowing recovery.

Throughout our trip up the river, made easier by recent rains raising the river level and minimising the need to haul the boat over rapids, we passed other longboats, many with children returning to school after a weekend with their families. Most children board, even from the age of six, as often the river is impassable. Without exception, all of these people showed a welcoming smile.

Longhouse Life

The Longhouse must have been fully 75 yards long with 26 doors, housing 26

families and all built on bamboo stilts some 15 foot above ground level and covered in reed mats. We were welcomed by the head of the Longhouse and invited to drink tea. The language barrier prevented great discussion and after a short time all had to join the members of the Longhouse on the communal veranda. There we were inspected closely and shown many of their local carvings, gongs and intricate hand-woven mats. None were for sale and would be passed down through the families. Many items had been made over 100 years ago.

In order to make the most of the afternoon, we were soon back in the boats and heading up the river to collect some fish. These were netted and the largest fish was 4-5 inches long and yet again we were told that this river system was all but fished-out, mainly by the over zealous use of dynamite, or worse, poison. Having collected our fish, it was back to the Longhouse and a communal wash in the river, which was not warm and I certainly felt watched. All drains led to the river and I hoped that there was not an ever larger longhouse upstream.

Dinner was with the head man's family. This consisted of noodles, rice, fish and a few items that I cannot describe and which required much effort to eat with a smile. False enjoyment also had to be limited or you were promptly given more! All the women had to wait until the male members of the family had eaten.

Dinner over, the generator sprang to life and we spread ourselves among the residents. I offered the three bottles of brandy to the head man who received them with much approval and having poured himself a glass, he tasted it and with much ritualistic panting to show how strong the liquor was, passed the glass to me. I enacted his role but for me it was real - the crude brandy burned my throat - and I passed back the glass. Glass by glass, all was handed round and I felt that the three bottles were insufficient. However, help was at hand and I managed to purchase from an enterprising member of the Longhouse, a further 20 bottles of rice wine neatly bottled in Guinness bottles.

Next morning we awoke at first light to the sound of crowing cocks. The fighting cocks were being tended and fed the best of the scraps. A few cups of tea later we all said our fond farewells and departed down river. Sadly, though understandably, these people wanted to open their Longhouse to tourism as they had heard that others had done this and valuable income could be earned. I wondered

how much had already changed, but change would now come rapidly and will be unstoppable.

Kinabalu

Christmas was spent climbing Mount Kinabalu which at 4094 metres is the highest summit in South East Asia. Kinabalu National Park is very well run and once again the hospitality and efficiency of all staff was exemplary.

Our journey took us on to Danum Valley Field Research centre where we saw Hornbills and signs of many



◆ Limestone Pinnacles, Gunung Mulu National Park

Elephants, all in the logged forests. We also saw Orang nests but no Orangs and although Sumatran Rhinos are found in the area we saw no signs of these. However, our bird 'tick list' was growing as was our list of mammals and reptiles.

From Danum we flew to Gunung Mulu National Park to visit some of the

limestone caves and climb to view the famous limestone pinnacles. Two longboats, the taxis of Borneo, transported us from the tiny airfield to our temporary camp some three miles from the Park Headquarters. Deer Cave, famed for its grandeur and Wrinkled-lipped bats was our first destination. To witness hundreds of thousands of bats leaving their roost was truly wondrous. I can still shut my eyes and picture this great exodus, when for over an hour bats streamed over us, with Peregrine Falcons taking their supper with effortless ease.

The following morning we collected our permits and guide to take us to the base camp of the pinnacles. This involved a three hour boat trip with much hauling over the rapids, followed by a five mile walk through the forest. Our climb was planned for the following morning and we were told that if it rained, the climb would be cancelled as it would be too slippery. Dinner and breakfast were cooked over an open fire and we slept on the floor. Local brandy helped us sleep and ignore the mosquitoes.

Limestone Marvels

The ascent was a hard slog but our guide Philip allowed us a half way stop for water and biscuits and never pushed us harder than we could manage. It was hot and humid and limestone was both sharp and slippery. The climb took us a little over three hours and the pinnacles were more than enough reward, with low cloud constantly rolling past these great ghosts of limestone standing proud of the forest. One could only gaze and marvel. They reminded me of some giant silent army and were maybe the guardians of Gunung Api (Fire Mountain). Plans for a helicopter pad and a five star hotel no doubt will improve the Park's finances but inevitably there will be a trade-off. I am glad I was there when one had to climb and we felt a smugness that unlike so many we had not turned back.

We saw much more of this rapidly changing country than I have space to describe and as a holiday I loved it. I urge anybody with three weeks to spare and the time to do a little homework to visit Sabah and Sarawak, enjoy the food, the wildlife and the spectacular scenery. You will come home feeling fitter and more aware, and hopefully having met people as hospitable as all those I had the good fortune to meet on my travels.

