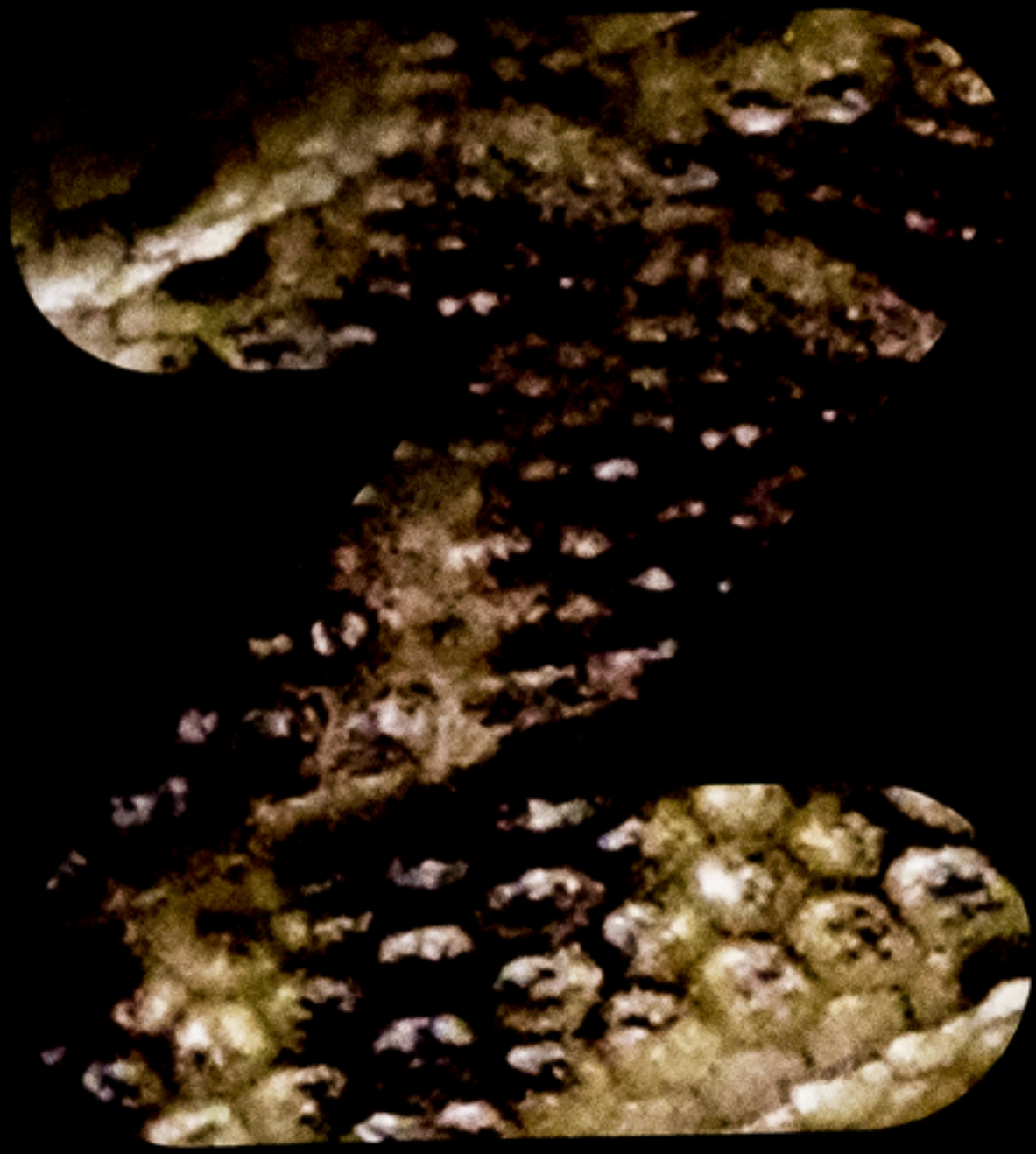


Spring 2007 **Issue 29**

The official magazine for Chester Zoo
Members and Adopters



Enter the Dragons



d
rity and
need your
e care
and
d.



- 2 Director's Pen Introduction
- 3 Zoo Additions
- 8 The Magnificent Seven
- 10 Conservation Making a Difference
- 12 FFI Events
- 13 Biodiversity
- 14 Growing Concerns
- 16 Members' Trip
- 17 Gardener for a Day
- 18 Conserve Madagascar
- 20 Dine with the Lions
- 22 Fundraising Focus
- 24 Events

Director's Pen

By Gordon McGregor Reid
Director General

A warm welcome to the Spring issue of Z – and what a lot has happened since I wrote to you last!

2006 finished on a fantastic note for us all with our busiest December in the Zoo's history. More than 62,000 people visited and we finished the year having welcomed an impressive 1,161,710 visitors in total.

The *Frost Fair* proved to be a big success and we were delighted to see so many of you enjoying the ice rink. I quite enjoyed taking a spin myself!

No doubt many of you may have heard the story of our Komodo Dragon, *Flora*, who made the headlines around the world with the story of her 'virgin birth'. For those of you who missed it, you can read all about it on pages 6 and 7.

Flora aside, it looks set to be another busy year around the Zoo generally this year. Progress on our new *Realm of the Red Ape* exhibit for our orang-utans continues to gather speed and we look forward to its official opening in May. Building work on our new exhibit for Indian Rhino is also coming along well as are works to the main entrance. We will keep you up to date on progress through the pages of Z.

The Zoo also played host to a record number of weddings and naming ceremonies last year. If any of you are planning a big celebration over the next few months, then we hope you will consider holding it here at the Zoo's Oakfield manor house!

In closing, I would just like to thank you for your continued support. Our total membership is now over 28,000 and we have more than 7,000 adopters. Your commitment to us is greatly appreciated and your help enables us to continue our good work.

I hope to see you all in the Zoo very soon.



Zoo Additions

Welcoming new arrivals to the Zoo

Livingstone's Fruit Bat

New in the *Twilight Zone* are 4 male Livingstone's Fruit Bats (*Pteropus livingstonii*). They are truly enormous bats from the Comoro Islands. In the wild they face many of the threats that Rodrigues Fruit Bats do and the species is now Critically Endangered as a result of habitat loss and hunting.



Zoo Additions



New species are now arriving in time for the imminent opening of the new *Realm of the Red Ape* exhibit at the end of May. Among them are these two new beautiful venomous snakes – the White-lipped Viper (*Trimeresurus albolabris*) and the Mangrove Snake (*Boiga dendrophila*).

Photos of White-lipped Viper, Reticulated Python and Boiga courtesy of Douglas Sherriff, Chester Zoo.



Mangrove snake

Mangrove snakes are back-fanged venomous species and their venom is quite mild and will only usually cause humans some pain and discomfort. Adult snakes can grow up to 2.5 metres in length (8 feet). In the wild, during the day, it can be found coiled asleep in the branches of mangrove trees or on trees overhanging rivers in the forests. At night they will move between the trees searching for their lizard, bird and small mammal prey.

White-lipped viper

White-lipped vipers are a relatively small tree-living venomous species that grow up to about 1 metre (3 feet) in length. They are ambush predators and wait motionless hanging in an S-shape position for their usual frog prey to hop past.



Reticulated Python

Joining the venomous snakes in the *Realm of the Red Ape* will be the Reticulated Python (*Python reticulatus*). Reticulated Pythons are the longest species of snake on earth. Adults have been known to grow to over 10 metres (30 feet) in length. They live in the tropical forests of Asia, but have also now successfully adapted to living in villages, towns and cities where they are known to hunt rats, chickens, cats, dogs, goats and pigs. Their large size and intricate patterning mean they are still killed in large numbers for their leather which is then used to make belts, boots and bags. The Reticulated Python is the one species of snake where there are very rare, but confirmed, reports of them eating people.

Zoo Additions



Rothschild giraffe

Being this good looking is no tall order for Chester Zoo's latest addition.

Molly made her debut at 10.30am on Monday November 13 and is the first Rothschild giraffe to be born at the Zoo. Mum is *Kelly*, six, and dad *Thorn*, five.

Kelly has taken to her new role as mum and just 30 minutes after she was born, *Molly*, who weighs 70 kg, was on her feet.

Mike Jordan, Chester Zoo's Curator of Mammals and Birds, said: "To begin with *Kelly* was a little anxious in her role as a new mum and we were on

standby to intervene and help the calf, but they have now taken to each other and *Molly* is suckling and mum *Kelly* is being very attentive. She is coming along very well and we are delighted with her progress. The Zoo has a good track record when it comes to breeding giraffes and we are delighted to welcome another to the fold."

The birth of the Zoo's first Rothschild giraffe is all the more welcome as there are only 600 Rothschild giraffes left in the wild in Kenya and Uganda.



Asian Elephant

24-year-old Chester Zoo elephant *Thi* has also become a mum— with a little help from the local hospital.

The male Asian Elephant calf, named *Raman* by Blue Peter viewers, was born inside the Zoo's new elephant house, *Elephants of the Asian Forest*.

The elephant team was prepared for the new arrival as *Thi*'s hormone levels had been analysed three times a week by experts at the Countess of Chester Hospital. A significant 'drop' in *Thi*'s progesterone level gave the Zoo team a time period to begin night watches in preparation for the birth.

Thi, who has been at Chester for 15 years, is already mum to *Assam*,

now at a zoo in Belgium, and *Sithami*, who lives at Chester. *Thi* is also grandmother to *Sundara*, who was born in March 2004.

The new arrival, which weighs in at between 90 – 100kg and stands just under a metre tall, brings the number of elephants in Chester's herd to 10. *Raman* is the first calf for dad *Upali*, 12, the third elephant calf to be born at the Zoo in two years and the first to be born in the new house.

Mick Jones, Chester Zoo's Elephant Team Leader, said: "Elephants have a long pregnancy – *Thi*'s pregnancy was 23 months. It is a long wait so we are very excited to finally meet our new addition, particularly as this is the first elephant calf to be born in the new house.

"*Raman* is settling in well and the females of the herd are taking great care of him. *Thi* is an experienced mother who knows what she is doing.

"The birth of *Raman* means we now have three generations of elephant here at Chester and also one of the most successful breeding herds in Europe. Everything went very smoothly and we'd also like to thank staff at the Countess of Chester for their help."



The magnificent seven

Flora, one of our two female Komodo Dragons, shot to international fame in December with a nativity story all of her own.

Flora, one of our two female Komodo Dragons, shot to international fame in December with a nativity story all of her own. With impeccable seasonal timing, *Nature*, the world's leading Scientific Journal, published this dragon's tale in the week before Christmas.

The story starts on the 21st May 2006, when *Flora* laid a clutch of 25 eggs. Eleven of these eggs looked very healthy and so the reptile staff put them in our incubator. A few weeks later and three of the eggs collapsed. The reptile staff opened these three eggs up and discovered tiny embryos inside - showing that the eggs were fertile.

Fertile dragon's eggs are not in themselves unusual, but what made this discovery incredible was that *Flora* was a 'virgin' and had never been mixed with, or mated by, a male dragon.

Desperate to find out exactly what had happened, the staff contacted scientist Dr Phill Watts at the University of Liverpool. Dr Watts carried out genetic fingerprinting of the small embryos and of all other Komodo Dragons in the UK. This 'paternity' testing proved that *Flora* was indeed both the mother and the 'father' of the fertile eggs. By an amazing coincidence, during his tests, he discovered that four dragon babies at London Zoo, which hatched in April 2006 from eggs laid by a female called *Sungai*, were also the result of a 'virgin conception'. On the 15th January, after an anxious eight months of incubation, Chester

Zoo's first ever Komodo Dragon baby started to hatch. Over the next two weeks, this first hatchling was joined by six siblings. The babies all measured between 40 and 45 centimetres in length and weighed around 100-125 grams (about the same as a king size chocolate bar).

The seven new additions are currently being cared for in the zoo's specialist off-show reptile area where they are enjoying a diet of crickets, locusts and mice, and receiving the specialist care they need in their early days. Once staff are certain they are all happy and growing normally, they will be moved into a purpose-built baby dragon enclosure on public display.

All the babies are beautifully patterned, with distinctive black and yellow markings. They will eventually lose this bright colouring as they grow.

Flora produced these babies using a method of reproduction called parthenogenesis (from the Greek partheno, meaning 'virgin' and genesis, meaning 'birth'). Parthenogenesis has been shown to occur in a few other reptiles before now, including some snakes and other lizards. This is however the first time that it has been demonstrated that the world's largest lizard species can reproduce in this way.

This discovery in Komodo Dragons has very important implications for understanding how they and other reptile species are potentially able to colonise new areas. Theoretically a

female Komodo Dragon in the wild could swim to a new island on her own and then breed.

Parthenogenesis is not the same as cloning. Although all the DNA from the babies came only from *Flora*, her babies are not genetically identical to her. This is possible because of the way in which the cells divide to produce the egg before the embryo starts to develop.

The genetics of this process means that all seven of *Flora's* babies will be males. This is because, in Komodo Dragons gender is determined by the W and Z chromosomes - males have two Z chromosomes (ZZ), whilst females have one Z and one W (ZW). When parthenogenesis takes place, the egg will carry just one chromosome from the female, either a W or a Z which is then duplicated. This results in eggs that will be WW or ZZ. WW eggs are not a viable genetic combination, but ZZ eggs are, and will lead to male baby dragons.

There are fewer than 4,000 Komodo Dragons left in the wild and they are found on only three islands in Indonesia: Komodo, Flores and Rinca. They are under continuing threat in certain parts of their range from human encroachment and habitat destruction. *Flora* and her sister *Nessie* are part of an international zoo breeding programme for this threatened species, and this remarkable reproductive discovery will have important implications for the future of the cooperative programme.



'...this is the first time that it has been demonstrated that the world's largest lizard species can reproduce in this way.'

Making a

NEZS Conservation Outreach Update



Jaguar Programme

Chester Zoo continues to support a PhD study in Central America entitled 'Designing a protocol for the rapid assessment of Jaguar density using mark-recapture and index based camera trapping methods'.

We have also recently awarded two further Jaguar Small Grants and in addition to this we have become founding members of the Human-Wildlife Conflict Collaboration (HWCC). This is a new initiative to improve collective efforts to address human-wildlife conflict worldwide.

Philippines Programme

Ongoing support has been provided for the Philippine Cockatoo Conservation Programme (PCCP). The PCCP works to conserve and restore the most viable populations of the Philippine Cockatoo and their habitats, including associated flora and fauna. Their goal is for the species to be down-listed from 'Critically Endangered' to 'Endangered' within the next four years.



difference

Overseas Conservation

Chester's Elephant Section team leader Mick Jones joined Alex Zimmermann on a field work trip to our Assam Haathi Project in December, visiting the study sites, assisting with tracking elephants and providing elephant husbandry training (especially foot care) at wildlife reserves and Assam Zoo. Two further projects supported by Chester Zoo have received support from our bird keeping staff. Paul Morris went to Palawan in the Philippines to help with the release of Philippine Cockatoos, whilst Karen Neech and Gareth Evans went to Mauritius to help with the hand rearing and incubation of Mauritius Olive White-eye chicks.

Keeper for a Day Grants Scheme

Due to the success of Chester Zoo's Keeper for a Day Scheme we were presented with a unique opportunity to fund some additional conservation projects. Through the Keeper for a Day Grant we provided funding for 8 diverse projects for species such as the Hoolock Gibbon, Grey Crowned Crane, and the Black and White Ruffed Lemur.

Other Grants

- Partula Field Programme Consortium – Chester Zoo continues to support this project which recently received the BIAZA Meritorious Award for Best Field Conservation Programme.
- Gastrointestinal parasite burdens of great apes and their husbandry staff in an African setting – a comparison. This is the second part of a joint project between Chester Zoo's Veterinary Department and Liverpool School of Tropical Medicine.
- Northern Bald Ibis – Chester Zoo has provided funds for two Northern Bald Ibis projects; one in Algeria and the other in Ethiopia.

News on Conservation from Around the World

Good

A new brush-finch has been discovered in a remote Andean cloud forest in Colombia. The bright-yellow and red-crowned Yariguies Brush-finch was named from the indigenous tribe that once inhabited the mountainous area where it was discovered. The discovery of this new species has spurred efforts to protect the area.

Bad

It has been reported recently that the Chinese River Dolphin (*Lipotes vexillifer*), also known as the Baiji, is functionally extinct. The Baiji was found only in the Yangtze River in eastern China and a recent expedition searching for this rare creature ended without a single sighting.

The Baiji suffered massive population declines over recent decades primarily due to over fishing and shipping traffic. It is thought that a few individuals may still exist but not in sufficient numbers to breed, leading to the species being declared functionally extinct.

Fauna and Flora International (North West Group) at Chester Zoo



Spring Programme 2007



Bottle-Nosed Dolphins – The Use of Research Photography

Friday 23 March 2007

Charlie Phillips

It probably sounds nice to spend much of your working life taking photographs of your favourite animal on earth, but it can be jolly cold when they live off the North East coast of Scotland!

Charlie Phillips has dedicated much of his adult life to the research of the individual animals that live around the Black Isle and Moray Firth, and his photographs form the basis of Charlie Phillips Images which make it look easy. It isn't! Charlie is also the Whale and Dolphin Conservation Society's Adopt-a-Dolphin Field Officer, and as such he has a unique affinity with the individuals he tracks, and with those who support the invaluable research work of the WDCS. Come and view these amazing animals from Charlie's stunning photographs.

Tickets for these events may be available on the door, but advance booking helps keep costs down. Please call Penny Rudd on 01244 650215 to reserve tickets. Doors open at 7.00pm for a 7.30pm start at Chester Zoo's Russell Allen Lecture Hall, off the A41, just before the Park & Ride. Members and non-Members of FFI are welcome to attend; tickets cost £7.50 for FFI Members and £8.00 for non-Members, with a concession of £5 for students. All ticket prices include a buffet and wine.

Underwater Encounters – Meeting Humpbacked Whales and Others

Friday 13 April 2007

Sue Flood

We are delighted to welcome back to FFI, Sue Flood, famous for her magnificent filming for the *Blue Planet* series, where she made history with some of the unique film sequences she obtained for that programme while working as a BBC Producer. Now working freelance, Sue has been all around the world in search of rare footage, spending time with Polar Bears in the Arctic, and more recently she has been instrumental in filming sections for the *Planet Earth* series. Sue will take us on a journey from Antarctica to Tonga. This is an evening absolutely not-to-be-missed. Sue is an enthralling speaker!

Preview of the Autumn 2007 FFI Programme

'GRASP' – The Last Chance for the Great Apes

30 November 2007

Ian Redmond

Ian Redmond is a tropical field biologist and conservationist, renowned for his work with great apes and elephants. For 30 years he has been associated with mountain gorillas, through research, filming, tourism and conservation work. As with his mentor, the late Dr Dian Fossey, the main focus of his work shifted in 1978 from research to conservation work, after a turning point in his life when poachers killed Digit – a young silverback in one of the Karisoke study groups. Ten years later in Kenya, the experience was repeated when some of the cave-elephants he was studying were killed by ivory poachers. As a result, he became a conservation consultant and advisor for organisations such as the Born Free Foundation, the Dian Fossey Gorilla Fund, Wildlifeline and the International Fund for Animal Welfare. To encourage such groups to work together, he established and chairs the Ape Alliance (70 organisations linked via www.4apes.com), the African Ele-Fund and the UK Rhino Group (www.rhinogroup.org.uk). He is now Chief Consultant with GRASP, the UNEP/UNESCO Great Apes Survival Project he helped launch in 2001.

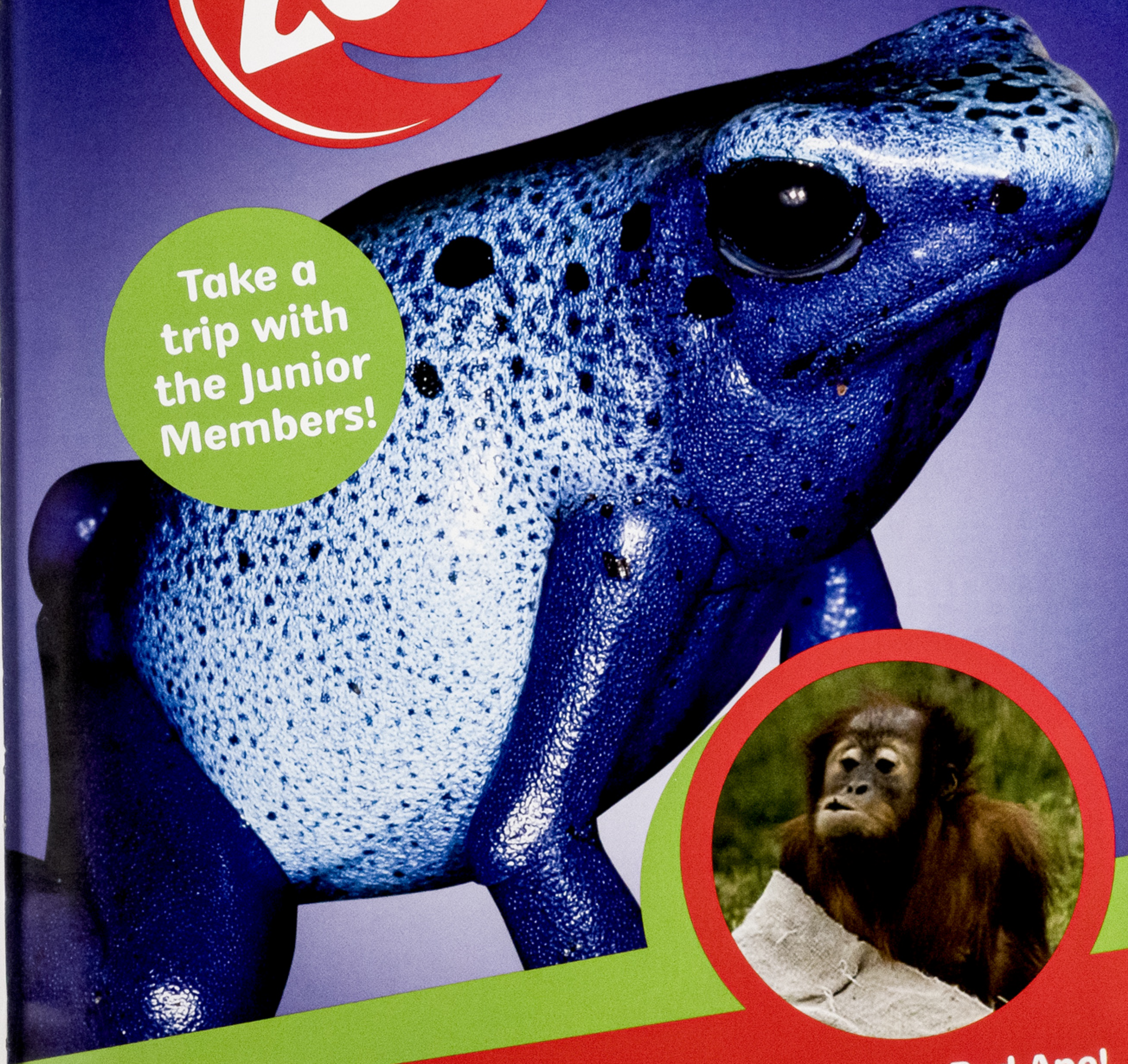
He will talk to FFI about his work with GRASP – The Great Ape Survival Project and this will be an introduction to this UN-led partnership, and will detail his latest missions to save the Great Apes in all of the 23 countries of the world in which they exist.

Spring 2007 Issue 29



Competitions!
Puzzles!

Take a
trip with
the Junior
Members!



Coming soon! Exciting new exhibit – **Realm of the Red Ape!**



Education

Events 2007

Joseph Banks Room

This exhibition room runs a changing programme of displays. The room is always staffed by Presenters and displays usually feature interactive elements for children.

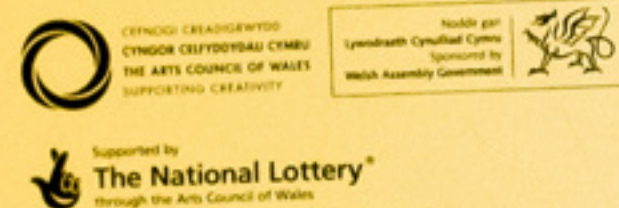
Spinning a Yarn

Sat 13th Jan

Sun 18th March

An illustrated account of the silkmoth's journey from egg to thread by Ann Bridges

Supported by The Arts Council of Wales



Eating Creepy Crawlies

Thur 5 Apr – Fri 31 Aug

Mmmmmmm... an exhibition to tickle the thought buds. A travelling exhibition from the Natural History Museum and featuring live insect exhibits. At breakfast time when you eat toast and honey, have you ever considered that you are eating bee vomit? This exhibition looks at the variety of insects eaten around the world and celebrates an alternative food source.



Spirit of the Jaguar

Sat 17th Feb 11am – 3pm

Customs & Excise Museum Roadshow

Demonstrators from the National Museums Liverpool visit the Zoo to highlight the plight of endangered species with the help of their handling collection and an art activity.

Summer Theatre

End July to beginning of Sept.
Magical Interactive Children's Theatre

Watch the animal kingdom come alive on stage, outdoors on the Arara Lawn.

Coming Soon! Realm of the Red Ape

Exciting new exhibit!

Experience life in the tree tops – sit in an orang-utan night nest, find shelter from the rain under a broad leaf, experience a tropical thunder storm, listen to stories of orang-utan rescues on your mobile phone.

Coming Soon! Magical Madagascar.

An interactive trail for families and young children to support the EAZA 2007 campaign for conservation in Madagascar

Leaving Chester Zoo!

Stephen, Georgia and Charlotte are on the bus on their way back to school after a great visit to Chester Zoo. From the clues below can you work out each child's full name, their age and their favourite animal at the Zoo?

1. Georgia is older than Stephen McRobie
2. Charlotte's favourite animals are not the penguins.
3. The child whose favourite animals are the orang-utans is 6 years old.
4. Miss Marriott is 5 years old.

Clue: If you haven't done a logic puzzle before, put a tick in the grid where you know something is true – eg where Stephen and McRobie meet – and a cross where you know something is false.

	Surname	Age	Favourite Animal
Stephen			
Georgia			
Charlotte			

	Marriott	McRobie	Mayo	5	6	7	Orang-utans	Elephants	Penguins
Stephen									
Georgia									
Charlotte									
Orang-utans									
Elephants									
Penguins									
5									
6									
7									

To be in with a chance of winning a £10 voucher to spend in the shops, send your completed quizzes to:
Z Kidz Zoo Competition,
c/o Marketing Department,
Chester Zoo, Upton by Chester,
Chester, CH2 1LH
by Tuesday May 1 2007

Junior Members' Summer School/ Workshop August 2007

Chester Zoo is offering a very special event this summer for Junior Members of twelve years old and above.

Mon 13 to Fri 17 Aug 2007

9am to 5pm daily

(Drop off at 8.30am and collection at 5.30pm can be arranged)

The aim is to enhance the service offered to Junior Members and fulfil the needs of the older Juniors (12 – 17) at a time when they tend to have been joining in with events for a few years, have a real interest in zoos, but the regular monthly events cannot provide the more detailed zoo and animal knowledge that youngsters need to make informed decisions about careers, school GCSE subject choices and such like.

Above all, it should be great fun and a rare opportunity to become much better acquainted with the real work involved in zoos – you will be surprised what you find out!

We will provide full days so that this is accessible to as many children as possible, including those who have working parents, ie. 8.30am – 5.30pm. Juniors will be required to join-in for the full week, rather than dipping in and out on different days. A maximum of 25 – 30 places will be offered, on a first come first served basis.

The Summer School is not designed to fulfil school syllabus criteria but is entirely tailor-made for Juniors who want to know more about the purpose of zoos, conservation objectives, animal welfare, nutrition,

veterinary work, enrichment, plant displays etc. We will use the Education Classrooms as our base, but will spend much of our time out and about in the Zoo and the Zoo's wider estate.

A charge will be made to cover the cost of all provisions and materials used. The full cost will be £125 for the week, and while we will provide drinks and snacks during the day, the Juniors should bring their own picnic lunch.

Mon 13 Aug

AM: Introduction to explain the Programme of Events, behavioural expectations, housekeeping etc.

Why Zoos?

Powerpoint and Discussion Session Animal Emergency procedures explained

Zoo Tour and Picnic Lunch

PM: Botany in Zoos Indoor

Greenhouse session (half day)

Starting the Summer School

'Craft Project' To be continued all week

Tues 14 Aug

AM: Powerpoint Outreach Conservation Projects overseas Animal Records – The Dating Game and Personal Passports

PM: Zoo Library Visit, Zoo Website information, Elephant and Sealion Training explained.

Weds 15 Aug (Day Out)
Full Day Away

Thurs 16 Aug
(Native Species Day)

AM: Powerpoint presentation on Native Species
Black Poplars, Pearl Mussels, Water Voles, Sand Lizards etc.
Visit to Water Vole breeding area behind Jags
Sand Lizards
Live Mammal Trapping – Field visit

PM: Harvest Mouse Project
Brief Powerpoint and Field visit.
Bird Watching
Making Bird Boxes

Fri 17 Aug

AM: Zoo Nutrition (The Balloon Game)
Environmental Enrichment

PM: Careers in Zoos
Tour of Veterinary Hospital
Being a Zoo Vet or Veterinary Nurse

Close – Workshop Scrapbooks
zoo quiz etc.

Please ring Penny Rudd on 01244 650215 as soon as possible if you would like to reserve a place for this Summer School.

Congratulations to December's winner, Bridget Jackson, nine, from Wrexham.

Junior Members'

Programme of Events 2007

Tracks & Signs

Sat 17 March

(Please note change of date)

This is probably one of our most popular events that includes the wide age range we cater for. This is your chance to see the Zoo from the animal's view of the visitors, as you will be going inside some of the enclosures to search for footprints from which to make plaster casts. March is the best time of year for this as it is normally muddy – but please bear this in mind when you dress in the morning. Hopefully, you will have a souvenir of your day to take home with you.

Eights and over can come along and join the messiness, when we meet outside Oakfield House at 11am, returning there for collection at 4pm. You will need a picnic lunch, and it is important that you wear clean, very old clothes and clean wellies please.

Shugborough Home Farm

Sat 21 April

We love our visits to this beautiful stately home in Staffordshire and find that Spring is a perfect time to visit the Home Farm to see the rare breeds and shire horses. Home Farm also has wonderful displays of cheese making and bakery skills.

Eights and over are invited to join us, leaving the Staff Entrance at 9.30am and returning for 5pm. Bring a picnic.

The Greenwood Centre

Sat 19 May

Back by popular demand, this seems to be one of the Junior Members' favourite haunts! Set within the Snowdonia National Park, the Greenwood Centre is an environmental park offering fun and games as well as good education.

The amazing grass slide, boat races, woodland walks, archery and den building activities to name a few always keep everyone well occupied for the day.

Eights and over should put it in the diary early. We will leave the Staff Entrance at 9.30am, taking a picnic, and return at 5pm.

Anglesey Sea Zoo and Butterfly Palace

Sat 16 June

This will be a busy but enjoyable day split between two very interesting venues on the Isle of Anglesey. We will visit the Sea Zoo in the morning and then travel on to the Pili Palace to see their great collection of butterflies in the afternoon.

We will leave the Staff Entrance at 9.30am and return at 5pm. Eights and over should bring a picnic and sunscreen.

How to be a good Zoo Keeper!

Weds 25 July

This is a unique opportunity offered to Junior Members to spend a day working alongside a zoo keeper. The work can be tough and demanding so we strictly limit this event to those Juniors of 12 or over. We try to match Juniors to their favourite section, but places are limited so this cannot be guaranteed. Please arrive prepared to work hard, with clean wellies and an additional completely clean set of clothes to work in.

Owing to the Zoo's biosecurity measures, it is important that the clothes you wear to work on the sections have not been in contact with any farm animals, or even your pets at home, since they were last washed.

We will meet outside the Oakfield at 10.30am, and the day will finish for Juniors at 4pm. Please bring a packed lunch. Also please note that bookings for this event will not be taken before 8.30am on Wednesday 12 July 2007, and will be strictly on a first-come, first-served basis.

Summer Barbeque

Thurs 9 August

Our summer barbeque has become a regular feature for the Juniors' diary as it has proved immensely popular. Perhaps this is because it is our chance to be in the Zoo when there are no other visitor noises to distract you and the animals, so it is a different zoo experience. We usually aim to have a speaker to chat to you or to engage in craft activities during the evening, but you can be sure to find it relaxing.

We would like to invite eights and over to join us for a 7pm start, when you should arrive at the Ark Restaurant (near the Tigers) via the Zoo's Staff Entrance on Caughall Road. Parents are asked to collect Juniors from the Ark Restaurant at 9.45pm please.

Please Note:

Bookings must be made for all events. Please ring Penny Rudd at the Zoo on 01244 650215, not more than two weeks before the event you would like to attend. Places are offered on a first-come, first-served basis and may be limited. This list is provisional and in exceptional circumstances we may have to alter dates and venues. You will be informed of any such changes in Z and not by individual letter, so please keep up-to-date by reading the Junior Pages in each issue. A charge will be made to cover the cost of those events which involve transport, entry fees, materials or the provision of food, and you will be advised of this at the time of booking.

Mussels in decline

The Freshwater Pearl Mussel (*Margaritifera margaritifera*) is one of the longest-lived invertebrates known; surviving individuals in the River Dee are over 70 years old. It has a brown/black shell, and grows to 14cm long. These mussels burrow in gravel substrates between boulders in fast flowing rivers, and need cool, clear, well oxygenated, unpolluted water.

Species in decline

Freshwater Pearl Mussels have been exploited in Britain since pre-Roman times for small dark coloured pearls that occasionally occur in them. Scottish pearls were traded in Europe in the 12th century. Larger scale commercial exploitation developed across the UK during the 16th century, when river bailiffs had to ensure the best pearls were kept for the king. Many people worked in the pearl industry in the 19th century, but this level of operation was not sustainable and the UK mussel population crashed. Mussel numbers have not recovered since the pearl industry ended, and the Freshwater Pearl Mussel is now endangered across its range. River Dee mussels have not

reproduced successfully for more than 30 years and are gradually dying of old age.

The Project

Chester Zoo became involved in conservation work to save the endangered Fresh Water Pearl Mussel in North Wales back in 2003. The project has come a long way since then. Back in 2003 we started to check up on the sites where the few remaining mussels in the River Dee had last been recorded. Surveying for these mussels is relatively easy in small rivers where the water is not too deep, but survey in the Dee needs dry suits and snorkels (part funded by the Zoo) and can be quite exciting! Monitoring across North Wales has identified two new mussel populations, but several older ones seem to have become extinct since the 1990's. The remaining animals are mostly over 70 years old and many are reaching the end of their lives – if they die without breeding the species is likely to be lost from the region.

In 2005 it was decided that we should take 50 mussels from the Dee into captivity to breed them

in a safe, protected environment then return young animals to suitable places on the river after about five years, when they are large enough to have a good chance of survival. A sample of 12 mussels was taken to the Environment Agency hatchery at Maerdy in 2005 as a trial to perfect the handling and care techniques. These mussels all survived the move and settled well, so another 32 were collected in spring 2006. We had hoped to see evidence of breeding this year but have been disappointed so far.

Good news and bad news...

Surveys across North Wales have identified two new mussel populations, but several others appear to have become extinct since the 1990s. The remaining animals are elderly; if they die without breeding the species is likely to be lost from the region. In 2005 fifty mussels from the Dee, and more from other rivers in North Wales, were taken into captivity to try to breed them in a safe, protected environment. The plan is to return young mussels to suitable habitat when they are large enough to have a good chance of survival. Breeding this species is very complicated as mussel larvae must spend several months attached to the gills of fish. This stage has just been accomplished by Environment Agency Wales staff, and our first baby mussels are now in 'intensive care'! They are less than 1mm long and we have around 50,000! The mussels that have bred are not those from the Dee, but we very much hope that these will breed next year ...fingers crossed.



Meat eaters serve up unusual display

The Zoo's collection of carnivorous, or meat eating plants, continues to expand and this spring some of them will form the basis of a new display outside the Grow Zone.

A selection of hardy plants has been chosen to go in the garden feature, which will include representatives of our native UK carnivorous species. There are more than 600 species of carnivorous plants in the world, 12 of which occur in Ireland and Britain. Carnivorous plants are a fascinating example of how plants can adapt to their environment. These plants are naturally found in wetland habitats including lakes, bogs, fens, swamps, rain forests, damp pastures, bare rocks, ditches and pools. The soils in these areas are deficient in nitrogen so carnivorous plants have evolved to attract, capture and digest animal prey from which they derive their nutrients.

How does a plant catch an animal?

Before the plant can benefit from a lovely nutritious meal it first has to catch its prey. There are two basic trapping mechanisms: active and passive. Active traps move in response to their prey and are used by Bladderworts, Sundews, Butterworts and the Venus Fly Trap.

The methods used are snap traps, fly paper traps and suction traps. Passive trappers do not move to catch their prey. For example Pitcher Plants and Cobra Lilies catch prey in pitfall traps. The plants lure their prey using a variety of substances such as sugary mucous and sweet nectar.

They also attract prey by their appearance using glistening or strongly-veined leaves. Then they trap prey by using glue, trap-doors or slippery chambers. Once trapped the victims have little chance of escape and the plant secretes digestive enzymes to break down the prey into nutrients that can be absorbed. Following digestion, all that remains are the unwanted bits, such as insect legs and outer body husks.

Paul Leach is to be congratulated for his work in building up the collection and the whole Nursery Team have been involved in the design and construction of the new garden. We would like to thank the Carnivorous Plant Society for their generous donation which helped to fund the construction of this display.





‘The plants lure their prey using a variety of substances such as sugary mucous and sweet nectar.’

Members' Trip to Edinburgh

The three elements of this trip are an afternoon in Edinburgh Zoo, a day on the Isle of May and a free morning in Edinburgh.

Departing Chester Zoo on the morning of Saturday 28th July we expect to arrive in Edinburgh around 1.00pm. We'll go straight to the Zoo where we'll remain until around 6.00pm when we leave for our hotel in Bathgate, 20 miles west of the city. Dinner will be in the hotel (time to be confirmed on arrival) and the rest of the evening is free to do as you wish.

On Sunday morning after a full Scottish breakfast, we'll set off for the fishing village of Anstruther on the Fife coast, our boarding point for the sailing to the Isle of May, a National Nature Reserve since 1965. Our boat is the May Princess which carries 100 people and has a saloon, snack bar and toilets on board. The island has had a lighthouse on it since the 1600s and was also home to a monastery, remnants of which can still be seen. More dramatically,

it is one of the UK's most famous seabird islands with around 200,000 birds of 12 species at the peak of the breeding season. The main species are Guillemot, Razorbill, Kittiwake, Shag and Puffin and you are likely to see Gannets from the Bass rock fishing out at sea. There's a small visitor centre with toilets on the island.

We return to the Cairn Hotel in the early evening giving some time for a rest before dinner. On Monday morning after breakfast the coach will drop us in Edinburgh city centre where you are free to explore the delights of the city until 1.30pm when we will start back for Chester with an anticipated arrival time of 6.00pm.



Green Fingered

Have you ever wondered what it would be like to be a Gardener for a day at Chester Zoo?

Well now is your chance. We are offering the chance to work with our team of expert gardeners in the glasshouses and the grounds. You will spend time working with our orchids, cacti, carnivorous plants or some of the other exotic species in the nursery. You will also have the opportunity to work alongside our team out in the Zoo. You might be planting, pruning and even watering in one of the animal houses. For £99.00 you will spend the whole day with members of our team and when you get home be able to impress your friends with your new found horticultural skills and knowledge. The days will take place on every Wednesday from 4th April – 31st October.

Contact Mark Sparrow, Curator of Horticulture on 01244 650236 for more details.



Arovako i Madagasikara!



Nosy marco endrika – Island of diversity!

Whilst Dinosaurs still roamed, and mammals had yet to evolve, Madagascar, the world's 4th largest island, detached from Africa. When early mammals did eventually evolve on the mainland a handful amazingly reached Madagascar on rafts of vegetation, after drifting some 400 kilometers! Here they evolved, in isolation, over many millennia. Today over 100 terrestrial mammals are found in Madagascar, all of which are found nowhere else in the world!

A species found nowhere else is known as endemic, the many lemur species of Madagascar are just one example. A large percentage of all Madagascar's wildlife is endemic. Because of this, and the diverse

Arovako i Madagasikara! – Conserve Madagascar, is the latest campaign by European zoos aiming to highlight conservation needs in Madagascar and raise crucial funds for conservation projects. But what makes Madagascar so special and why is this campaign needed?



range of habitats, Madagascar contains a huge proportion of the world's biodiversity for its size, and is the third most important biodiversity hotspot on the planet!

Arovy Madagasikara – Protect Madagascar!

Endemic island species are very vulnerable, compromising over 70% of recent extinctions. Madagascar is no exception with half of the island's wildlife threatened with extinction. The main cause for this is habitat loss.

The people of Madagascar are very poor and most make a living from agriculture. Land is under extreme pressure and Madagascar's forests have been drastically reduced in recent years – 90% are now gone!

Tsy maintsy velona Madagasikara – Madagascar must live!

Madagascar is an amazing global asset which, through pro-active measures from the government (encouragingly, President Ravalomanana is backing this campaign and recently pledged to triple Madagascar's protected areas), conservation organisations, and the support of the international community, can be protected for future generations.

The EAZA Madagascar Campaign aims to raise €500,000 to support 20 of the projects fighting to protect Madagascar's wildlife and provide the Malagasy people with the skills needed to effectively manage and protect their natural heritage, this can only be done with your help!

How we can help!

- Visit Madagascar – responsible ecotourism to Madagascar promotes the national economy and supports conservation.
- Adopt a Chester Zoo Lemur online; £10 will go to the Madagascar Campaign.
- Enter the online Lemur Island Competition to win a once in a life time opportunity to go onto Chester Zoo's Lemur Island and come face to face with our Lemurs.

For further details on the campaign, and how you can help, see our website – www.chesterzoo.org.



Dine with the lions

If you fancy dining with lions or munching with the tigers then Chester Zoo has a cracking line-up for 2007.

The Zoo's Oakfield Manor House will be hosting special events throughout December.



However, it remains the perfect place for a marriage or naming ceremony with a difference.

Special events including birthdays can be held in the historic building which looks out over the lion enclosure, home to the Zoo's Asiatic lions, Asha and Asoka.

Martin Davies, General Manager, Food, Retail and Events, said: "Chester Zoo offers something unique for people looking for a twist with their lunch or dinner or for

people looking for a venue to hold a special event.

"Not only can diners sample a wonderful menu but they are given the chance to roam around the Zoo afterwards and come face to face with our animals.

"The Oakfield is the perfect setting for night time entertainment and caters for up to 130 guests, making it a superb venue for a 'do' with a difference."



For more on Christmas at Chester Zoo events visit www.chesterzoo.org or call 01244 380280.

Save up to 25%*
off your 2007 Eurocamp Holiday


Eurocamp
Because Life is for Living

Call us today on

08703 338 338

or book online at

www.eurocamp.co.uk

and quote Z003 to request your brochure and access your discount

*Terms and Conditions Discounts - A 5% discount is available at 86 selected parcs and a 10% discount is available at a further 62 selected parcs for departures 21 July – 2 September 2007. -Chester Zoo staff & members will receive a 25% discount off the base price of all holidays completed by 20 July 2007 or started after 3 September 2007 excluding all departures to parcs in Paris, Picardy, Normandy and Holland between 25 May and 4 June 2007.

The offer applies to new bookings only and cannot be combined with any other Eurocamp offer or discount. The discount applies to the base price and is applicable to all accommodation types excluding Premier and is subject to a minimum of 3 nights being booked. The offer is subject to availability

News

Evans family Emagine a magical Christmas

Back in November, Chester Zoo offered people the chance to win a family holiday to Finnish Lapland with Emagine to meet Santa Claus. Everyone that pre-booked tickets for Frost Fair was entered into a prize draw and the lucky winner was Denise Evans and her family from Market Drayton in Shropshire.

Chester Zoo members, the Evans family flew off in search of snow and of course the man himself – Santa.

Denise said: "The holiday was amazing. On arrival we had a traditional welcome ceremony at the reindeer farm followed by a reindeer ride. Other activities that we got to do included husky dog rides, sledging, ice fishing, snow mobiling, quad bike rides and of course we all got to visit Santa. I have never seen the girls so quiet and the presents they received were brilliant. We felt very lucky as it had snowed before we arrived

and again whilst we were there, so we got to do everything.

"The highlight of the holiday for my youngest daughter Cerys was the Husky Dogs and she was thrilled when she actually got to hug one.

"Everything was catered for and Emagine couldn't have done more for us.

"On behalf of the whole family I would like to thank Chester Zoo and Emagine for making our Christmas so special."

If you would like to book a holiday with Emagine visit their website at www.emagine-travel.co.uk or call **0870 9025399**

100 Club

The winners of the prize draws held recently were:

October 2006

Mrs Mary Doogan, Chester	£100
Ms Linda Ash, Liverpool	£100
Miss G M Webster, Nottingham	£50
Mrs Andrea Warner, Wrexham	£50
Mr Peter Hobson, Sheffield	£50

November 2006

Mrs Elaine Glover, Liverpool	£100
Mrs Karen Waring, Chester	£100
Miss Alice Wakefield, Chester	£50
Mrs Joan Atherton, Manchester	£50
F H & B M Waight, Mold	£50

December 2006

Mrs Florence Bland, Richmond	£700
Mr Nigel Jones, Wrexham	£100
Miss G M Webster, Nottingham	£50
Mrs Debra Stott, Bebington	£50

Membership of the 100 Club is still invited. All prize winners will be notified by post and will be listed in the next edition of Z. Please inform us as soon as possible if you change address.

If you wish to participate, please contact the Development Office on 01244 650 229.

Our Legacy to the World

By Marian & Gwyn Evans

We [Marian and son Gwyn] live in Oldham and always have done. We have visited Chester Zoo many times as a family and even went twice in one week because there's so much to see. We have had so many happy memories of our visits and can even remember back to when there used to be Gorillas.

We started thinking about the future a while back and wanted to leave a gift to Chester Zoo as our contribution to the Zoo's future.

So we made our Wills and mentioned Chester Zoo which gave us peace of mind as we wanted to make sure all our wishes are fulfilled. This meant we became Lifetime Supporters which was great as we knew we were helping our local Zoo. We also get invites to special events and a special tour as a thank you (feeding the penguins was the highlight of the year!).

Given the problems in the world today, especially with climate change being much in the news we feel it is of the utmost importance to support organisations like Chester Zoo and we try to urge others to do the same.

For more information on becoming a Lifetime Supporter please contact **Development** on **01244 650292**

We should all be concerned about the future . . .

our children will have to spend the rest of their lives there

Ring in the Changes!

Have you had a new mobile phone lately? If so, then why not recycle your old one by sending it to Chester Zoo.

That way, not only will you be helping the environment but you will also be doing your bit for charity!

Chester Zoo's recycling scheme is a great way to recycle old printer cartridges and mobile phones that are no longer wanted.

If you would like more information, or would like us to send you a recycling envelope, simply contact Development on **development@chesterzoo.org** or via **01244 650229**.

Members and Adopters

Reminder to all Members and Adopters who have purchased or who have complimentary tickets without an expiry date that they are to be used by end of June 2007. If you would like to return any unused tickets to the Membership and Adoptions office they can be re-issued with a one year extension period.

Events 2007

To book any of the events please contact: **The Events Office – 01244 650209**

Back by
popular
demand!

Mother's Day Lunch

Sun 18th March

£23.25 adult

£15.75 child under 11 years

Admission into the Zoo from 10am. Treat the special ladies in your life to a three course lunch within the Oakfield Manor House.

Elephant Evening and Buffet

Thurs 17th May

£31.50 per person

Take a tour with our knowledgeable guides to meet our elephant keepers taking in many other animal enclosures along the way. The evening will be rounded off with a buffet served in the Oakfield Manor House.

Evening Garden Tour and BBQ

Thurs 28th June

£29.50 per person

The gardens of Chester Zoo are justly famous, winning many awards over the years. Enjoy a tour in the company of our knowledgeable gardeners followed by a buffet served in either the Roman Garden (weather dependant) or within Oakfield Manor House.

Family Picnic Evening

Weds 11th July

£23.95 adult

£8.95 child

Admission into the Zoo from 4.30pm (No animal houses will be open after this time). After collecting your picnic from the Oakfield Manor House at 6.30pm select your favourite spot within the grounds. Wine may be pre-ordered and collected with your picnic.

Carnivore Evening

Weds 8th Aug

£28.50

An evening visiting our Red pandas, sealions and big cats returning to the Oakfield Manor House for a delicious buffet.

Primate Evening

Thurs 6th Sept

£31.50

Enjoy a tour of our famous Chimp House and Monkey Island. Keepers will be on hand to answer any questions. To round off the evening a buffet will be served in the Oakfield Manor House.

Hawaiian Gala Evening

Debenhams in Chester

June (date tbc), 6.30pm

£5 per person

Reception drinks, goodie bags, cosmetic demonstrations plus much more. Don't miss this great opportunity to indulge yourself, whilst helping to raise funds for Chester Zoo's vital conservation work.

For more information or to reserve tickets, please contact Development on 01244 650229

Chester Zoo

Upton-by-Chester, Chester CH2 1LH

Tel 01244 380280

Fax 01244 371273

Email info@chesterzoo.co.uk

Web www.chesterzoo.org

Director General: Gordon McGregor Reid

Editor: Rachael Ashton

Z is published by:

North of England Zoological Society,

Upton-by-Chester, Chester CH2 1LH

Founded in 1934, the North of England Zoological Society is a registered charity and receives no government funding. We need your help and support to raise funds for the care and conservation of our rare animals and endangered species across the world.