



2009 Zoo Review

Annual Report of the North of England Zoological Society
for the year ended 31st December 2009



Celebrating 75 Years of Conservation

Our Vision

A diverse, thriving and sustainable natural world.

Our Mission

To be a major force in conserving biodiversity worldwide.



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Cover: Grevy's Zebra ©Steve Rawlins;

Left: Blue Morpho Butterfly;

Right: Giraffes *Bella* and mum, *Kelly*.

Chairman's Statement

A Year of Achievement for Our 75th Anniversary



The general economic downturn in 2009 proved to be a challenge for the Society. However, during this period of stringency, Chester Zoo performed remarkably well, partly due to a strategic programme of cost savings and partly to a tendency for families to holiday in the UK and enjoy its leisure attractions. As a result, we ended the year with an increase in paying visitors (983,000 versus 929,000 in 2008) and an overall total of 1.36 million (including the 'under threes'). This is the second highest total in the Zoo's history. There was also a corresponding all-time record in income generation.

The Society has again received numerous awards. For example, we received three awards from the British and Irish Association of Zoos and Aquariums: including one for conservation of a threatened bird, the Mauritius Fody. This is a tremendous success story, highlighting over 15 years of conservation work and habitat restoration in Mauritius and delivering our Mission "to be a major force in conserving biodiversity worldwide."

In the Zoo, we continued our exciting Natural Vision project in alliance with the North West Development Agency. We also added several attractive exhibits including our first outdoor walk-through bird aviary – themed around the Tsavo National Park in Kenya where we support conservation projects. The aviary includes a number of species new to the Zoo. Our main exhibit highlight was the walk-through Butterfly Journey, opened by the Rt Hon Andy Burnham MP, Secretary of State for Culture, Media and Sport. The Journey was dedicated to Beatrice Jones, NEZS Chairman from 1991 to 1998, who sadly died in December 2008. We also note with sadness the death of former NEZS Trustee, Leaford Patrick, in February 2009.

At the NEZS 74th AGM, I announced the retirement of three Trustees: Prof Malcolm Bennett, Dr Caroline Evans and Mr Chris Mahon, who I would like to thank for their support. The Trustees recommended four candidates in their place: Mrs Catherine

Buckley, Mrs Rebecca Burke-Sharples, Dr Simon Dowell and Dr Judith Skerritt, who were duly elected by the Members. I welcome them to the Board and am confident that they will contribute greatly to the Trustees' governance of the Society.

To mark the 75th anniversary of the founding of NEZS, Mrs June Williams (daughter of our founder George Mottershead) officially opened an exhibition documenting the Zoo's history. This was followed by a celebratory dinner hosted by our President, His Grace the Duke of Westminster KG, OBE, TD, DL.

Our success in 2009 has again been thanks to the support of our members, visitors and external stakeholders. I would also like to add my gratitude to our President, His Grace the Duke of Westminster KG, OBE, TD, DL and our Vice-Presidents, the Rt Hon Lord Wade of Chorlton and the Hon Mrs Margaret Jane Heber-Percy, for their continued support.

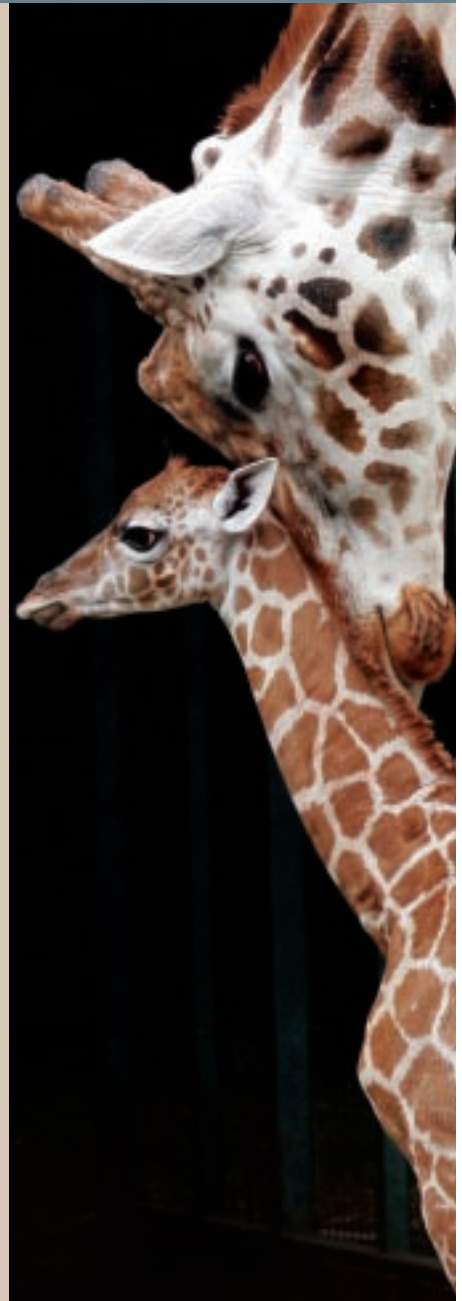
In April 2010, Gordon McGregor Reid announced his intention to step down as Director General. I know that, as a biologist, he is very keen to fulfil his passion for zoological research, field conservation and university teaching, which will involve a continued but external association with the Zoo beyond October 2010.

Gordon has seen us through some very challenging times and has transformed the Zoo into the UK's Number 1 wildlife attraction of choice. He has given NEZS and Chester Zoo a very creditable profile throughout the world, in conservation, research and education. His election to President of the World Association of Zoos and Aquariums is evidence of the high esteem in which he is held by the zoological community.

Gordon should feel proud of what he has achieved. On behalf of the Trustees, Members and staff, I would like to thank him for his dedication and professionalism and wish him and his family every success for the future.

In this my final year as Chairman, I pay tribute to the management and staff of the Zoo for their dedication and commitment to creating a truly remarkable conservation organisation. I feel honoured to have worked so closely with such an enthusiastic group of people. I wish them continued success and hope they reach their Vision of a diverse and sustainable natural world.

Tony Williams, Chairman,
North of England Zoological Society.



Visitors
1934
11,611
2009
1.36 million

Director General's Review

Reflecting on Our Proud History and Looking to the Future, Gordon McGregor Reid



This Annual Report documents what is, in the round, probably the most successful year that Chester Zoo has ever had. Thankfully, this is despite the worst general economic downturn in recent UK and world history and the coldest UK winter in 31 years! It is now 75 years since our formal establishment in 1934 as a charity, the North of England Zoological Society. Hence it is appropriate in this 'diamond anniversary' year, to reflect on our proud history, celebrate current achievements and look forward to the future.

History and Development

Our humble origins are given in a nostalgic book by June Johns (1969) who recounts a visit in 1902 by an eight-year-old George Saul Mottershead to a nameless zoo in the north of England. Appalled at the housing and treatment of the animals, he said to his accompanying family: "When I grow up I'm going to build a zoo ... a zoo without bars". So began a remarkable journey which led to the establishment of Chester Zoo in December 1930, on an initially small site in the suburb of Upton dominated by Oakfield Manor (now an architecturally listed Zoo building). For our 75th anniversary, the Discovery and Learning team have used library archives to richly document for the public our impressive passage from a small, local, private and financially impoverished zoo – founded on principles of excellent animal welfare – to a large, prosperous, charitable trust. The Zoo has become a major force in conserving animal and plant diversity worldwide as well as a beacon in tourism and the economy for Chester, Cheshire, the North West and beyond. Included in the electronic appendices is a copy of the first ever Annual Report of Council, 22nd May 1935 – which records just over £1,343 annual turnover – compared to some £24 million today!

Certainly, we owe much to George and, following his death, to Dr Michael Rogers Brambell. He took over as Director in 1978 and, with a comparatively small team of staff, established our first education department, initiated zoo conservation breeding programmes and developed many attractive exhibits including the Chimpanzee Islands (1988) so creating a far sounder economic base for the charity. We also owe much to our Council Trustees past and present (see page 35) who have, on an entirely voluntary and selfless basis, governed the Society since its inception, guiding the established staff in matters of both business and mission. There has been a long-line of distinguished Chairmen from Colonel Richard Blair Young in 1934 to the currently serving Tony Williams – and his designated successor in 2010 Professor Peter Wheeler. We have recently created a photographic 'hall of fame' in our modern Cedar House headquarters to give credit to such leading individuals.

The Zoo had already established an international reputation when I joined in 1992 serving under Michael Brambell as the first Curator-in-Chief:

"Chester Zoo is one of the foremost zoos in Europe. In the sheer size and diversity of its collection, in the compelling innovation of its design, and in the breathtaking beauty of its gardens, it has had a profound influence upon the style and development of zoological gardens all around the world... The difference between Chester and most other urban zoos seems to be the emphasis on space." John Ironmonger The Good Zoo Guide (1992, pages 73 - 79)

Ironmonger gave us maximum (four-star) independent ratings for recreation and education but was less generous in terms of the quality of our conservation breeding work (three stars) and considered us "unimpressive" in terms of scientific research – one star, in stark contrast to four star research ratings for London and Jersey zoos. He concludes his generally positive account by stating that:

"Not everything in the garden is rosy however. Here and there are signs that parts of the zoo are becoming a little old, or rather overdue for improvement. Maintaining a huge zoo like Chester is an enormous logistical operation, and as visitor numbers have fallen since the mid 1960's, so the zoo has had difficulties in maintaining its essential fabric."

During my period of service, including as CEO since late 1995, I and my team have endeavoured to address any perceived shortcomings and build with renewed ambition on the solid

institutional platform provided by my forebears. Our conservation, education, scientific and animal welfare programmes are far more wide-ranging, diverse and effective than they have ever been (see pages 12 - 29). I am pleased to note that we have picked up dramatically from a 1995 visitor low of 679,000 paying visitors (760,000 in total) and since 1998 have had an unbroken run of 12 years with well over one million total visitors each year, far ahead of all other UK zoos in the same period. This also outstrips a historical 'million plus' run in Chester Zoo between 1963 and 1973 – and our last three years' figures represent all-time records for the Zoo. We have generated a correspondingly high income in 2009 and have a healthier surplus and larger bank reserves than at any time in our history. Why has this all happened? Well, an unsolicited published assessment in 2009 finds the large scale of recent developments (for paying visitors) and the pace of change to be "almost breathtaking" and considers that:

"Today Chester Zoo is regarded as the UK's top zoo with good reason ... Of course, today's Chester has much more conservation relevance but the Mottershead philosophy is still much intact as seen in the 'Natural Vision' project which is anticipated to increase the zoo's size by as much as 200 acres and may well prove Chester to be the finest zoo in the world if it all comes about." Tim Brown The Independent Zoo Enthusiasts Society's Guide to British Zoos and Aquariums (2009, pages 44 - 46).

Natural Vision

The Society has high aspirations for our flagship physical development project 'Natural Vision' 2010 - 2018 (see pages 10 - 11). First formulated in 1998, this strategy has been through several iterations to arrive at the exciting scheme which has recently been submitted to the Cheshire West & Chester Council, our Local Planning Authority. There have been persistent queries in relation to the need for expansion, given the already strong economic position of the Zoo and the effectiveness of our activities to date. Certainly, the NEZS is already a very successful charity for conservation, education, science and animal welfare. But it has only been able to provide such charitable benefits via visitor income generated from Chester Zoo gate entrance fees and through internal catering and retail sales. The Zoo is, as it were, the 'goose that lays the golden eggs' and funding our charity is entirely dependent on this (although we are planning to diversify our income streams to increase financial security).



"People forget that when the Zoo started we had virtually no modern construction materials but the staff really pulled together as a team and worked hard. Under my dad's leadership I feel we really achieved something very special that the people of Chester, Cheshire and the North West can be proud of almost eighty years on." June Williams

We know from our chequered history (see above) that visitor attendance can fall as well as rise and there certainly have been periods of business depression and severe institutional impoverishment. Any visitor attraction operating in today's highly competitive leisure sector needs to maintain its attractiveness, if it is to survive, grow and prosper in the long-term. To sustainably support our charity, we cannot afford to be complacent. The need to 'invest in success' and operate in an appropriately business-like way will be crucial in securing our future. I believe that Natural Vision provides an entirely new operating platform for the Zoo business and its charitable wing. It will raise visitor numbers (with repeat visits) to well above 1.6 million, greatly increase turnover and generate far more surplus income than we have ever had. A well-designed, environmentally sound zoologically-themed hotel, with stunning views of Natural Vision exhibits, will encourage guests to stay overnight and generate additional income. We need this income to invest in our charitable objects, which are becoming ever more expensive to deliver. Almost as a 'by-product' Natural Vision will – through additional local jobs, and the purchase of goods, supplies and services – create very

many millions of pounds of external economic impact for Chester, Cheshire and the North West. This has to be a good thing.

For our charity, more visitors means more people of all ages and from all walks of life who will listen to compelling messages in conservation and sustainable living for the planet. This includes individual responsibilities and actions concerning climate change and its impacts on biodiversity. More income and surplus means that we will be able to build a Conservation College to more effectively communicate these messages and serve as an international training centre. There will be international and national conservation, education and research conferences hosted between the College and the Hotel. More income means even better, more spacious homes and veterinary care for our animals, better supported breeding programmes and greatly increased conservation, education and scientific activity in nature at home and abroad, including more field programmes and projects. There will be better, more educational, exhibits for our visitors and better facilities for our guests. More income means that we can increase our grant support to organisations such as the IUCN Species Survival Commission and to Ecosystems India, where we have done award-winning partnership work to conserve Asiatic elephants and reduce human-elephant

conflict. Put simply, there is an increasing list of threatened animal species that would likely be extinct, were it not for the financial support coming from Chester Zoo. With more money we can save more lives of individual animals and save more species and habitats; and conduct biodiversity-associated work to alleviate human poverty and assist in human development. What can be more worthwhile than that?

In this, my final year as CEO, I wish Chester Zoo every success for the future and warmly thank my friends and supporters.

Annual turnover
1934
£1,343
2009
£24 million

Above: Exhibition documenting the Zoo's history, viewed by June and Fred Williams and their grandchildren.

Highlights of the Year

Recognition Across the Globe

JANUARY

Chester Zoo publicly unveils its plans for the Heart of Africa biodome and other Phase 1 works of the overall Natural Vision Masterplan.

FEBRUARY

Sumatran Orangutan *Subis* gives birth to female *Kirana*.

MARCH

The Jaguar coffee house opens, offering our guests the popular high street quality coffee brand, Costa.

APRIL

Iznee is the first Bornean Orangutan to be born at the Zoo for 10 years!

MAY

Female Eastern Black Rhino calf, *Bashira*, is born on 15th May, becoming the second rhino to be born within a 12 month period at the Zoo.

Director General, Gordon McGregor Reid, visits Mauritius as a guest of the Mauritian Wildlife Foundation to view projects supported by NEZS and to sign a new Memorandum of Understanding on our collaborative partnership.

JUNE

Our sixth Dreamnight – a special 'one-night-only' annual event for terminally ill children and their families – is held on 5th June. Over 100 staff and other volunteers give their time to welcome 90 families into the Zoo for a magical evening.

Our 75th Anniversary Exhibition, chronicling the history of the Zoo, is unveiled.

JULY

Music-maker and railway enthusiast, Pete Waterman, visits to re-launch the Zoo's revamped monorail – the only one of its kind in the country.

Our second dedicated amphibian breeding and veterinary care unit, APOD II, arrives and is now stocked with Critically Endangered Green-eyed Frogs from Costa Rica.



AUGUST

The Tsavo National Park Bird Safari walk-through aviary is officially opened by Councillor Mike Jones, leader of Cheshire West and Chester Council, along with NEZS Vice Chair, Prof Pete Wheeler and Director of Conservation and Education, Mark Pilgrim. The aviary has been created to help public awareness of valuable bird species which inhabit Tsavo National Park, Kenya, where the Zoo supports key conservation projects.

Chester Zoo receives three awards from BIAZA, the British and Irish Association of Zoos and Aquariums: an education award for its conservation education programme in Mauritius and the award for significant advances in husbandry and welfare for its work on tortoise husbandry guidelines. In addition, the Zoo collects an award for conservation of the Mauritius Fody, a conservation success story of over 15 years resulting in down-listing of the bird from Critically Endangered to Endangered. The award is won jointly with Durrell Wildlife Conservation Trust.

SEPTEMBER

Chester Zoo is awarded the 'North West in Bloom' trophy for the third year in a row.

OCTOBER

Chester Zoo becomes just the second zoo in the UK to achieve accreditation from the Marine Stewardship Council, meaning all fish sold in our restaurants and staff canteen comes from certified sustainable fisheries.

NOVEMBER

Two Mountain Chicken Frogs successfully metamorphose, having been hatched in Jersey Zoo and then 'fostered' by Chester Zoo's adult frogs!

DECEMBER

Chester Zoo achieves a world-first by monitoring and recording the heartbeat of a rhino using the newly-launched Littman stethoscope, which uses unique electronic Bluetooth technology.

From top: Baby Bornean Orangutan (April); Dreamnight (June); Pete Waterman (July); Opening of the Tsavo aviary (August).

Reflections on the Year

From the Executive Team

1. Gordon McGregor Reid Director General

"A year where the NEZS sailed into bright waters, avoiding large economic icebergs."

2. Mark Pilgrim Director of Conservation and Education

"When I look back at 2009 the one thing that stands out from everything else, is the Zoo team planning the storyline, layout and details of the exhibits for the Heart of Africa. Planning an exhibit of this enormous scale and complexity is never a smooth process, however, through teamwork, hard work, creative thinking and a just a few tantrums and tears it eventually all came together into something amazing."

3. Alasdair McNee Director of Corporate Services

"We found 2009 a very challenging year, however, the hard work and dedication of our staff and supporters helped us overcome these challenges and contributed to our success."

4. Simon Mann Development Director

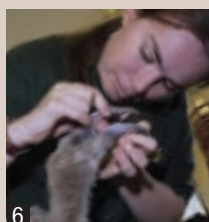
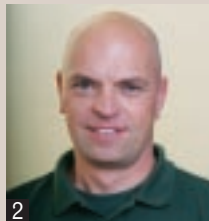
"What became apparent in 2009 was the wealth of goodwill that exists towards the Zoo amongst our colleagues within the business, cultural and education communities of the region. We have worked with a range of new stakeholders and strengthened links with longstanding supporters throughout 2009 and look forward to developing these partnerships in the years ahead."

5. Kevin Buley Head of Zoo Programmes

"Just like every year at the Zoo, there were hundreds of significant animal hatchings and births during 2009. However, the birth of our female Black Rhino baby in May and two Bornean Orangutan babies, born within a month of each other, will be animal arrivals I remember for years to come."

6. Stephanie Sanderson Head of Conservation Medicine

"One of the many highlights of 2009 was the opportunity to work with colleagues across Europe to collate information on Bluetongue in non-domestic species and, as a result, to be commissioned to write chapters on Bluetongue both for the main textbook on zoo and wildlife diseases and the infectious diseases handbook issued to all EU government animal health departments."



7. Roger Wilkinson Head of Field Programmes and Research

"The Conservation and Science Division teams' work has provided the basis to enable us to develop and maximise the conservation impact of our field programmes, projects and research."

8. Stephen McKeown Head of Discovery and Learning

"Our 75th anniversary year and all its celebratory events really brought home to me what a rich history we have as a zoo and how proud people are to work for an organisation that's been successfully delivering its mission through eight decades!"

9. Lynne Walker Head of Guest and Business Operations

"2009 will be a memorable year for me; this has been my first year at Chester Zoo and I feel privileged to have joined such an amazingly focussed, yet diverse organisation. The warmth and support of the team from day one has been overwhelming and I look forward to the challenge and opportunity to increase the business division's contribution to the future of Chester Zoo".

10. Martin Clancy Head of Marketing

"The wide ranging appeal of the Zoo was conveyed effectively through PR, advertising and customer service in 2009 and it was heartening to see these efforts pay off. The Zoo ended the year with a record number of 'paying' visitors and also of Zoo membership".

11. David Littler Head of Human Resources

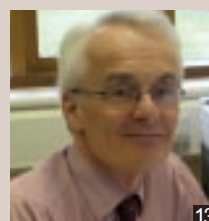
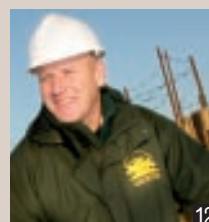
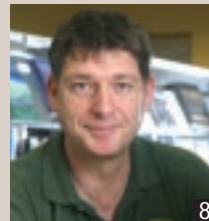
"HR rising to the challenge to make service delivery and people a priority."

12. Steve O'Brien Head of Estates

"In 2009 with a reduced Capital Budget the Estates team delivered a variety of capital projects utilising our in-house skills to the maximum, also ensuring the Zoo was maintained to the highest possible level."

13. Alan Sykes Head of Finance

"In 2009 we were initially concerned about the rapidly worsening macro economic climate and busily made plans to reduce the Zoo's expense base. However, by June we were delighted to see the Zoo still busy with visitors (although numbers were more subdued in the second half of the year)."



North of England Zoological Society Strategy 2007-2012

A Shared Vision for a Winning Team

Throughout 2009, the Trustee-approved strategy 'A Shared Vision' informed and guided the management team in planning, achieving and developing our Mission and supporting business activities.

Overarching strategic statement

To develop a substantial, expanding role in conservation of global biodiversity and habitat enhancement; and to support this through sustainable commercial activities, including managing the Zoo as a world class visitor attraction. To achieve this we will:

Strategic Objective

1

Focus conservation activity to achieve greatest impact.



Meaning:

- achieve greatest possible conservation benefit with available resources, and develop a SMART (key performance indicator) system to identify, assess, plan, prioritise, implement and evaluate programmes/projects; this may include targeted and well-audited charitable giving to projects or partners;
- forge partnerships with appropriate bodies and local communities, where doing so will maximize impact. Partnerships should be developed for substantial conservational, educational, scientific, business/marketing or sustainability benefits. This might sometimes include partnerships for animal welfare, combating climate change or for human development and poverty alleviation, but only where closely linked to our conservation mission;
- ensure partnerships are only with those that share our strategic purpose and closely relate to our ethics, values, programmes and policies.

Strategic Objective

2

Make clear, fundamental links between in-zoo activities and our field programmes worldwide.



Meaning:

- make the Zoo a 'living showcase' or 'mirror' for our work in natural habitats at home and abroad, including through naturalistic and well-interpreted 'immersion' exhibits;
- develop relevant and explicit Zoo-field linkages to generate practical conservation action and promote public understanding of and empathy for the natural world;
- facilitate staff exchanges between the Zoo and field projects and develop complimentary techniques for conservation, education, science and animal health;
- explain the work we do and why we do it – to ensure beneficial links are evident to our Trustees, staff, visitors and wider stakeholders, including overseas.

Strategic Objective

3

Promote, support and sustain our conservation work.



Meaning:

- be dynamic, proactive, forward-thinking and innovative in education, research, marketing and general communication activities, where all our staff become ambassadors portraying a positive image;
- achieve more, both scientifically and educationally, for conservation purposes – including through advocacy, developing the evidence base for decision-making and by giving lectures at home and abroad, or organizing/supporting lecture programmes, conferences and conservation workshops; and working to generally enhance public understanding, attitudes and behaviour through emotional engagement;
- communicate more effectively through the media, IT links, popular articles, general Zoo publications, peer-reviewed research publications and technical reports;
- engage with local, regional, national and international communities (including through 'zoo twinning') and represent the Zoo's interests on appropriate boards, committees and collaborative ventures; actively participate in (or, where appropriate, lead) external strategic exercises and conservation campaigns (e.g. networking via IUCN, WAZA, EAZA and BIAZA).

Strategic Objective

4

Make Chester Zoo the wildlife attraction of choice in the UK.



Meaning:

- ensure Zoo visitors gain through innovative animal exhibits and excellent guest services a very high-quality, distinctive, memorable, exciting and fun experience – so encouraging loyalty and repeat visits;
- become a nationally and internationally recognised 'quality brand' and key reference point for external stakeholders – such as potential partners for conservation, education (schools, technical colleges, universities), research, business, sponsorship and awards; and for media promotions (TV, radio, press, etc);
- be an even more attractive proposition in terms of staff recruitment.

Strategic Objective

5

Manage our people, work and activities to ensure long-term sustainability.



Meaning:

- effectively recruit, manage, train, develop, retain, recognise and reward our people (the 'human resource') and ensure good succession management;
- efficiently manage healthy, stable, self-sustaining populations of Zoo-bred animals and plants, so minimizing dependency on externally sourced livestock and to increase the long-term prospects for species survival and, where appropriate, reintroductions to the wild;
- achieve financial and environmental sustainability for us and future generations – where income matches needs and expenditure and activities are organized to remove or minimize any negative impacts on the environment;
- ensure routine implementation of 'best practice' and/or 'green values' (reduce consumption, reuse, recycle) in the areas of public and staff safety, health and the environment ('SHE'); and in our procurement (e.g. 'Fair Trade'), operation (e.g. ISO 14001 environmental management standard) and construction (e.g. BREEAM standard) and civil engineering (e.g. CEEQUAL standard).

Strategic Objective

6

Develop resource streams in support of our mission.



Meaning:

- maximise existing income – including from paid-for Zoo visits, catering, retail; and ensure rigorous audit and cost-control with cost-efficient procurement of contracts, supplies and services;
- reduce financial dependency on paid-for Zoo visits – because this can be an unreliable source of income, fluctuating yearly from aspects outside of our control, such as weather and external economy; additional streams can be financial, materials 'in kind', labour or voluntary work and would also include better economic use of the wider Zoo land holdings (as in the case of the 'Natural Vision' project);
- develop other means of funding (or 'in kind' benefits) such as diversification of retail and catering, web-based sales, commercial events and external investment; and fundraising through corporate events, sponsorship, donations, gifts, trust funds, legacies and conservation grants or other awards.

Supporting Strategic Objectives:



Natural Vision Project

Major Progress during 2009

Simon Mann, Development Director



Following the Masterplan sign-off in September 2008, the design team continued to develop the overall brief and specific Phase 1 elements, namely the 'Heart of Africa' biodome, the Main Entrance and Car Park.

Masterplan

Design and development of the Masterplan, based on a phased approach over 15 years, continued in 2009. The Society is preparing a 4-year capital expenditure programme to ensure organic growth of the project vision, to coincide with the opening of the Heart of Africa in 2014.

PHASE 1 ELEMENTS:

'Heart of Africa' Biodome

The design team continued to develop all aspects of the brief. Design workshops were held in early 2009, further to which the unique shape of the building envelope was refined. This was a process influenced by a number of factors:

- The desire for a naturalistic, organic form
- Specific animal welfare and holding needs

- A strong storyline celebrating the Guinea-Congo rainforest but recognising the vulnerability of its ecosystems
- The desire to create a world class, immersive visitor experience
- Accommodation of giant trees and shrubs to reflect the lush forest habitat
- Optimal natural daylight within the building envelope, plus control of heat and humidity and recycling of resources.

The biodome will house a range of species including Gorilla, Chimpanzee, Pygmy Hippo, Bongo and Okapi. In addition there will be a river ride, a high level walkway from which to explore the rainforest canopy and other elements delivering a strong educational theme. The biodome will feature state of the art education facilities that will provide satellite amenities to the future Conservation College.

'Heart of Africa' will deliver a series of Mission-related objectives along with significant economic benefits to the region. The surplus generated will support UK and overseas conservation programmes.

Sustainability

A vital issue for the Zoo is the sustainability of the biodome. An alternative to the BREEAM sustainability model has been adopted for the building – CEEQUAL, a flexible assessment scheme which lends itself better to the special requirements of this project. The Society is here pursuing a rating of 'Excellent'.

Sustainability Targets for the Heart of Africa

18% Carbon Reduction
40% Construction Waste
85% Reduction in Water Consumption

Main Entrance and Car Park

The main entrance and car park are proposed to be redeveloped to dramatically improve access and the entry experience by a number of means:

- Separation of ticket purchase and the turnstile
- Creation of a large public space between the retail shop and Tsavo café
- Second access off the A41 to the North
- Rationalised car park layout incorporating local biodiversity points and improved landscaping.



Green Travel Plan

The Society developed a Green Travel Plan in 2009, creating targets for reducing the Zoo's carbon footprint and increasing uptake of sustainable transport options by both visitors and staff. A free shuttle bus service was trialled between Chester Station and the Zoo over the summer holiday and October half term periods, which proved very successful, with almost 4,800 visitors using the bus. The Zoo is looking to make the service permanent from 2010.



Public Consultation

Engagement took place throughout 2009 with a wide variety of stakeholders. A dynamic

relationship has been developed with the City of Chester, including Cheshire West and Chester Council, businesses and the major cultural and tourist attractions in the locality.

A series of public consultation events were run in July 2009. Over 360 people attended these events, including representatives of the public sector, business community, our neighbours and other Chester residents. Many completed questionnaires establishing that over 90% were supportive of the Zoo's planning application. Throughout the year senior staff gave presentations to a number of local forums, parish councils and residents' groups.

Planning Application

The hybrid planning application was one of the largest and most complex ever taken forward in the region and was submitted to the Council on 22nd December 2009. It is anticipated that the outcome of the planning application will be determined by late Spring 2010.

Economic Impact

It is estimated that 'Heart of Africa' will not only safeguard 743 jobs but will also create 308 jobs within the Zoo and the wider regional economy

– with a significant proportion provided by the themed hotel development.

The Masterplan development increases the core Zoo by approximately 30% (13 hectares) although the majority of the Zoo's extensive land bank will remain unaffected by the development. The expansion will create a 2-day experience and an estimated 130,000 additional overnight stays per annum in the region.

Funding

The £3.8m Grant Funding Agreement with the NWDA concluded in December 2009 and further development funding is being secured. The main grant application to the NWDA, including an ERDF grant for the entrance works, was progressed in 2009. The Zoo's concept application for up to £40m was approved in June and the executive team are working closely with the NWDA on the main grant application programme to be submitted to the Treasury in early Summer 2010.

Far left: 'Heart of Africa' biodome, visual south view; Left: Development Director and local residents at a public consultation event, July 2009; Below: Inside the biodome.



**Economic Impact
Chester Zoo
£40 million**

**Chester Zoo +
Natural Vision
£85 million**

Conservation, Science, Education and Animal Welfare

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Progressing our Mission

Mark Pilgrim, Director of Conservation and Education



With every year I spend at Chester Zoo, I see more clearly how a visit to the Zoo can create an experience that can have a big influence, sometimes lifelong influence over people of all ages. Such is the power of people experiencing real live animals and getting a flavour and appreciation of the richness of the world's wild places through a zoo visit.

Getting people back in touch with nature and the natural world is vital if it is to be saved for future generations.

While 2009 was a year of us all tightening our financial belts, this did not hinder the momentum of us achieving our mission. As you can read throughout the pages of the annual report, we continue to build and develop our mission activities. To do this requires dedicated passionate and innovative staff and we have them in abundance.

In spite of all this, great progress was made towards delivering our six strategic objectives (page 8). Achieving this progress in delivering the strategy during a difficult year was due to the hard work, dedication and passion of the Heads of Divisions supported by staff at all levels within the Zoo and it is to their great credit. The details of these achievements can be found throughout this Annual Report and makes me very proud to be a part of Chester Zoo.

Natural Vision – Heart of Africa

Designing an exhibit as complex as the Heart of Africa is a daunting yet hugely exciting opportunity (page 10). During 2009 staff from all areas of the Conservation and Education Directorate played a key role in developing the story-line for the exhibit led by Discovery and Learning staff. This unfolding story for guests as they move through the Heart of Africa exhibit, of the forest, the people and the biodiversity that depend on it and how this affects us all and our future generations, is key to inspiring our guests about nature. Ultimately we want people to modify the way they live their everyday lives and consider how the things they do affect biodiversity across the world. This behaviour change is only possible once people really appreciate what a wonderful natural world we have and the enormity of what we stand to lose.

Planning to create this inspirational exhibit containing animal enclosures that closely mimic the forests of Guinea-Congo required an enormous amount of time, energy and creative thinking, particularly for the Zoo Programmes staff working closely with external consultants and architects.

“Getting people back in touch with nature and the natural world is vital if it is to be saved for future generations.”

Top, left: Mark Pilgrim, Director of Conservation and Education. Below, right: Meeting of Zoo Programmes staff.



Supporting Strategic Objectives:



Realm of the Red Ape (RORA)

Conserving Orangutans in Borneo and Sumatra



With only around 60,000 Bornean and 7,000 Sumatran Orangutans remaining in the wild, their conservation has never been as important as it is today. The survival of these Great Apes is under threat due to forest fires, logging and conversion of forests to agriculture, particularly oil palm plantations.

The state of Sabah is home to one fifth of Borneo's Orangutan population, a significant proportion of these found in the Kinabatangan floodplain where 'Hutan' began work in 1998. In 2007, we joined forces with Hutan on the Kinabatangan Orangutan Conservation Programme (KOCP).

KOCP combines holistic approaches to conservation to achieve sustainable solutions for orangutans and the people who live alongside them. Funded through our Keeper for a Day scheme, the KOCP works towards reducing human-wildlife conflict, protecting the forests, carrying out research and enhancing community involvement in conservation activities. A major achievement was the organisation of the 2009 Orangutan Colloquium, which addressed habitat fragmentation issues faced by orangutan

populations. The outputs of this will be presented in a paper for the State Cabinet.

Having already lost around 80% of the original forest, with the remaining being highly fragmented, a key objective of KOCP is to maintain enough connected forest habitat in Kinabatangan to sustain the current orangutan population. To deliver this objective, we support Honorary Wildlife Wardens to control human encroachments and illegal activities such as poaching and logging. The wardens monitor wildlife and work with local communities to reduce human-wildlife conflicts through improved land use management. In 2009, two additional areas home to orangutans were investigated; Beluran Mangrove Forest Reserve and Kulamba Kretam Forest Reserve – a management plan for both areas is being produced.

Honorary Wildlife Wardens 2009

- 15 poaching cases were addressed
- 5 encroachment incidents within the boundaries of the Sanctuary addressed
- 10 new field interns trained in data collection
- 3 elephants rescued

Hutan Hornbill Conservation Project

The Hutan Hornbill Conservation Project is a new component of the RORA programme which Chester and Woodland Park Zoos are supporting. Hutan are aiming to assess the current status of the eight species of hornbill along the target area of the Kinabatangan River in Sabah, via surveys and encouraging local participation in the identification of hornbills, through education programmes.

In the Zoo

The Zoo conservation breeding programme for both orangutan species is an increasingly important component of the overall conservation strategy and 2009 has been an exceptionally successful year with the birth of three animals. In February, Sumatran Orangutan *Subis* gave birth to female *Kirana*. This was followed in April and May by the first Bornean Orangutan births for over ten years at the Zoo. Male *Iznee* and female *Latifah* were born to mothers *Sareki* and *Leia* respectively. They were the first offspring sired by male *Tuan*.

With the continuing development of zoned areas within the Zoo, 2009 saw the opening of the new Asian Short-clawed Otter and Northern Babirusa exhibit in an area next to the Realm of the Red Ape building. As part of the same development, otters were introduced to the large outdoor orangutan and gibbon enclosure where they have been successfully mixed with these two species.

Asian Fairy-bluebirds were brought into the collection in 2008 and bred during this last year – a first for the Zoo. Two chicks were hatched and successfully hand-reared.

Numbers of Sumatran Laughingthrush are declining throughout their range as a result of their collection for the illegal bird trade and loss of forest. Chester Zoo has been instrumental in setting up and coordinating a new conservation breeding population for this species in Europe. Five birds came to the Zoo during 2009, with more animals due to arrive in 2010.

A new male Sumatran Tiger was imported from Prague Zoo as part of the EEP for this highly threatened species. The pairing of animals we now have at the Zoo has been recommended for breeding and we are hopeful of success during 2010.

Above: Bornean Orangutan © KOCP

Supporting Strategic Objectives:



Reducing Human-Elephant Conflict

Working with Communities in Assam, South Asia

As forests across Asia continue to be lost and human populations and agricultural land expands, elephant and people are increasingly coming into conflict. Human-elephant conflict is a major threat to the future survival of the Asian Elephant in the wild. Chester Zoo is helping local people live alongside Asian Elephants and helping provide answers essential for the long term survival of this species.

Assam

The Assam Haathi Project has trained over 150 people from local communities to defend their property and crops from elephants. Since the inception of the project both crop and property damage within the six project villages has reduced; in the Sonitpur District we have observed a dramatic decrease in crop damage from 113ha in 2006 to 26ha for 2008. The success of the project has led to it becoming largely demand driven and the project is regularly approached for assistance by local communities and organisations from across Assam. The practical handbook 'Living with Elephants in Assam' (available in English and Assamese) helped the project increase its scope and assist a larger number of affected communities.

In 2009, 16 workshops were conducted on alternative livelihoods including cash crop cultivation, animal husbandry and jute handicraft. As a result 31 community members are currently participating in alternative livelihood initiatives.

The project continues to use an evidence-based approach to address the wider strategy of human-elephant conflict management,



**Reducing
crop damage***

2006	2008
113	26
hectares	hectares

with current research activities looking at areas such as predictive modelling; evaluation of the effectiveness of intervention methods and investigating potential nutritional drivers for elephants crop-raiding.

Sumatra

The Assam Haathi Project is supported by the prestigious Darwin Initiative; following on from its success Chester Zoo was awarded a second Darwin Initiative award for human-elephant work in Sumatra in partnership with the Wildlife Conservation Society (WCS).

This project has identified a number of conflict hotspots and extensive efforts have been put towards implementing community-led human-elephant conflict mitigation strategies in these areas. The community-led approach has already attracted the support of local government who are now providing additional resources.

A Wildlife Crime Unit of 'community wardens' has been developed and deployed to support the work of legal enforcement authorities. This unit supports the investigation and prosecution of wildlife crime cases across Sumatra and adjacent areas of Java.

In the Zoo

As part of the continuing investment in the elephant herd, much of the remaining part of their indoor accommodation was converted from a rubber floor to a deep sand substrate. The pioneering use of sand in the building

when first opened in 2006 has since been replicated in zoos around Europe, largely owing to the success of the initiative at Chester.

The death of two year old calf *Raman* from elephant endotheliotropic herpes virus was devastating for all at the Zoo. This virus has been responsible for the death of over 30 zoo Asian Elephants worldwide in the last 20 years and has also now been isolated from wild populations. *Raman* was the first confirmed case of the disease at Chester Zoo.

Adult female *Birma* was exported in April of this year to Touroparc Zoo in France. This was the first export of an animal from the herd since we had moved them into a regime of full Protected Contact. The superb efficiency with which the move was carried out was testament to the months of planning, training and attention to detail by the elephant team, veterinary team, maintenance department, Registrar and others.

The ongoing endocrinology work with the herd has revealed that two of the females became pregnant during the year. The tests indicate that both animals will be due to give birth around August 2010.

*Elephant damage reduction within six project villages in the Sonitpur District.

Above: Elephant in tea gardens;
Left: Electric fence installation,
both images ©Assam Haathi Project.



Supporting Strategic Objectives:



Rare Species Conservation in China

Focus on Sichuan Biodiversity



Our support in China is focussed around the diverse forests and mountains of southern Sichuan, home to the Giant Panda, Red Panda, Clouded Leopard and a variety of rare pheasants. Protecting a network of broadleaf forest reserves in partnership with local communities and government, the Sichuan Forest Biodiversity Project is the core focus of our China Programme. Three reserves, Mamize, Laojunshan and Heizhugou now have permanently staffed field stations, allowing vital research and monitoring of bird and mammal populations to be carried out (e.g. camera trapping surveys). Training local reserve staff in sophisticated management techniques has allowed GIS to be used to target wardening activities in the areas most at risk from disturbance and damaging activities. The project encourages local communities to participate in conservation efforts, helping to preserve the forest by using and collecting its resources in a more sustainable way.

The upgrading of Laojunshan Nature Reserve to National status was a major achievement in 2009 and will ensure the permanent protection of the forest there for future generations. Pilot projects on installing biogas stoves into homes in Laojunshan, and fuel efficient stoves into

homes in Mamize were successful in reducing dependency on wood from the forests and these will be extended to more homes in 2010.

Community conservation education work carried out by reserve managers and also via our partnership with the Chengdu Giant Panda Research Base builds on the work in the reserves and will help to alleviate some of the pressure on the habitat through encouraging the community to take part in the conservation of the region. In 2009, a source book on environmental protection was produced for teachers in Gudui School in Mamize Nature Reserve after extensive consultation with local children and their families.

Funding was also provided for the development of a Wildlife Conservation Strategy for the Liangshan region. The strategy will highlight the importance of the biodiversity of the area and ensure that local development plans are consistent with protecting the endemic species.

Chester Zoo supports field research and conservation of the Critically Endangered Blue-crowned Laughingthrush. We continued this support in 2009 for core activities, together with our European partners, providing funding for surveys in Simao and Xishuangbanna and

field research and conservation management in Wuyuan. Since our first support in 2000, the known population has more than doubled from circa 100 to over 200 birds.

In addition, the newest component of the China Programme is improving the biodiversity conservation and management in the Gaoligongshan Mountain Range in Yunnan Province. Chester Zoo is partnering FFI to reduce threats to biodiversity in the area by building conservation capacity, raising awareness and using community based incentives.

In the Zoo

As part of the ongoing process to create more direct links between the animal and plant collection and our conservation field activities, this last year saw the creation of a Chinese aviary. This showcases species from the area including Grey-faced Liocichla, Collared Grosbeak and the Blue-crowned Laughingthrush, which is managed in the Zoo as part of a cooperative European breeding programme. In the past year, three specimens were bred and three new adult birds were brought into the collection.

There has been continuing success with our increasingly important collection of Southeast Asian turtles. During 2009 we bred the Critically Endangered Annam Leaf Turtle for the first time and bred further specimens of the Critically Endangered Three-striped Box Turtle.



Top: Red Panda (*Ailurus fulgens*);
Above: bird survey work, Mamize ©Dai-Bo.

Supporting Strategic Objectives:



Philippines Conservation

Helping Islands in Danger

The Philippines is one of the world's biologically richest countries with very high levels of endemism. This biodiversity is under severe threat as the human pressures on natural resources continue to grow, with large numbers of species threatened with extinction.

The Philippines has one of the highest rates of species discovery – with over 16 recognised as new to science in the last 10 years.

The Philippines is recognised internationally as a priority conservation 'hotspot'. Chester Zoo has been supporting conservation in the Philippines for 15 years, investing over £0.5 million during that time.

Chester Zoo's Philippines Conservation Programme continues to grow and supports a wider range of projects today, working with more partners, than ever before:

Polillo and Cebu

Projects on the islands of Polillo and Cebu are both examples of how pioneering community-based conservation can achieve results.

Ten effective community managed Local Conservation Areas (LCAs) have now been established on Polillo, totalling over 10,000 hectares (13% of the land area of Polillo).

Similar projects on Cebu have seen dramatic reductions in forest fires and the planting of over 50,000 native trees of 40 different species, including 2,500 seedlings of the Critically Endangered Cebu Cinnamon. A new research centre was completed at the Alcoy Forest, Cebu, which was funded entirely by Chester Zoo. New species continue to be recorded for the area, due to a combination of both habitat improvements and increased research.

Palawan

The Philippine Cockatoo Conservation Programme (PCCP) on Palawan now protects around 25% of the surviving wild population of this Critically Endangered bird. Using a community-based approach the PCCP has seen protected Philippine Cockatoo populations continue to increase. The project also continues to identify new sites and afford declining populations protection – Pandanan Island is the latest, now confirmed as having a Philippine Cockatoo population suffering poaching threats.



16 new
species
discovered
in the last
10 years

In the Zoo

Breeding centres play valuable roles in conservation breeding, research, education and reintroductions. The Philippine Spotted Deer, Visayan Warty Pig and Visayan Tarictic Hornbill are all threatened species being successfully bred both in the Philippines and at Chester Zoo. A new exhibit for the Visayan Warty Pig, opened at the Zoo at the end of the summer, has significantly increased capacity for breeding this species here. Breeding success in the Philippines has been such that 2010 should see reintroductions of both the Philippine Spotted Deer and Visayan Warty Pig. Hornbill conservation continues to be a major programme focus in both the Philippines and at the Zoo.

Capacity Building

Capacity building for Filipino staff has been supported through supervision and grant assistance of several PhDs. Chester Zoo staff also helped increase the capacity for freshwater fish conservation in the Philippines, providing training to fish biologists on the IUCN Red-listing process, fish identification, field techniques and the conservation breeding of threatened species.



Top: Philippine Spotted Deer (*Rusa alfredi*); Map above: 7,000 islands in 4 major island groups.

Supporting Strategic Objectives:



Ecological Restoration in the Mascarenes

Working in the 'Land of the Dodo'

2009
Mauritius Fody
downlisted
from Critically
Endangered
to Endangered



Right: Mauritius Fody Male ©Lara Thick;
 Below: Education work in the Mascarenes.



Endemic bird population numbers

Mauritius Olive White-eye

- An estimated 93 - 149 wild pairs exist in the wild and are successfully breeding
- The translocated population on Ile aux Aigrettes now numbers 17 birds, and successfully fledged chicks for the first time in 2009

Echo Parakeet

- 362 animals now estimated in the wild
- Over 104 chicks fledged 2008/9, a new record total.

The Mascarene Islands have witnessed many species extinctions, and more are likely as threats continue. However in the last twenty years these islands have been at the forefront of species conservation. The Mauritius Kestrel, Pink Pigeon and Echo Parakeet are examples of species saved from the brink of extinction. The latest success story, the Mauritius Fody, was downlisted from Critically Endangered to Endangered in 2009. This project, led by the Mauritius Wildlife Foundation (MWF), was recognised at the 2009 BIAZA awards, achieving the 'Best Field Project' award.

Chester Zoo partners MWF on several projects providing financial and technical support in many areas, from horticulture and bird hand rearing to education planning. In addition to the Mauritius Fody, the Echo Parakeet project had continuing success again this year. The Mauritius Olive White-eye also had a good season in the wild and, although there were a number of challenges with the translocation programme, these bred for the first time on Ile aux Aigrettes.

Reforestation and the propagation of Critically Endangered plants has also become a focal

conservation area. Major efforts are underway to restore the relict forest of Grande Montagne on Rodrigues, resulting in increased visits by school groups and tourists, and nurseries continue to successfully propagate Critically Endangered plants for future planting back into the wild.

Marine conservation activities, in partnership with Shoals Rodrigues, include ongoing coral and reef health surveys and community education to promote the sustainable use of the marine resources. Chester Zoo also continues to support further surveys for another species saved from the brink of extinction: the Rodrigues Fruit Bat.

Finally, 'Learning with Nature' was launched on Ile aux Aigrettes amidst a flurry of publicity in April 2009. The nature trail was designed to provide a glimpse into what the island would have looked like 400 years ago when the Dodo was alive. Our Director General was the guest of honour at the launch which saw over 150 students and 12 teachers take part over the five-days. This project won the 2009 BIAZA 'Best Education Project: schools and educational institutions' award.

Supporting Strategic Objectives:



Black Rhinos Back from the Brink

Rising to the Challenges in Africa



In 2009 Kenya suffered its worst drought in 25 years. Predicted livestock losses in many areas are around 80% and wildlife has been hit badly. Globally there has also been a surge in the poaching and trade of ivory and rhino horn. Chester Zoo's support for the conservation of the Black Rhino is vital.

Chyulu, Kenya

The drought has led to an increase in poaching and other illegal wildlife incidents. Maasailand Preservation Trust (MPT) rangers normally prosecute around 100 poachers annually, this year numbers rose to 460. As rhino poaching increases globally our support for the dedicated protection of the rhinos of Chyulu has left these intact. Chester gave additional emergency support for MPT activities this year, we also provided technical assistance by helping to implement a database and GIS system to effectively manage and utilise patrol data.

A workshop disseminating the results of Chester Zoo funded genetic research was also supported, the outcome of this was the decision to manage the Chyulu rhinos as a free ranging population, providing additional

water resources and security; with a view of bolstering the population in the future with translocated rhinos.

Laikipia, Kenya

Chester Zoo staff ran a workshop to conduct a review of the Environmental Education Programme and to plan for future development. Twenty-two colleagues attended including representatives from government and local conservation organisations. The Environmental Education bus provided by Chester Zoo carries over 2,000 school children annually to nature conservancies to experience and learn about wildlife.

The bus and education officer also attends events such as the World Environment Day. This provides an opportunity to further the message of environmental conservation. The team attended seven festivals with a total audience to the bus of 2,600.

Mkomazi, Tanzania

The Rafiki Wa Faru (Friend of Rhino) education programme services the 14 secondary schools that border Mkomazi National Park. Extensive monitoring and evaluation of the programme has been carried out by Zoo staff

and is showing a heightened awareness of conservation efforts and a growing appreciation of the benefits of Mkomazi National Park. The number of people brought into the park on the education bus since June 2008 is 1,140.

Additionally Chester Zoo assisted financially with the translocation of three rhino from the European Breeding Programme to Mkomazi. These animals (from Dvur Kralovce Zoo) boosted the number of Black Rhino at Mkomazi from 9 to 12 individuals.

In the Zoo

On 15th May Black Rhino *Emma Elsa* gave birth to a healthy female calf which was named *Bashira* meaning, 'predictor of good news' in Swahili. *Bashira* was the second rhino to be born within a twelve month period at the Zoo.

Major modifications to two of the rhino buildings and the construction of two specially designed fences have greatly improved the ability of the staff to access the animals and to develop the Protected Contact training programme for them.

As part of the continuing development of the Tsavo zone, the Tsavo National Park Bird Safari exhibit was opened to the public in May. This walkthrough aviary has completely transformed the look of a former crane paddock and provides a fantastic immersive viewing experience of species such as Hammerkop, Von Der Decken's Hornbill, Lilac-breasted Roller and Village Weaver.

Gemsbok bred during 2009 for the first time in two years – the first breeding from the new male. Roan Antelope, Kirk's Dik Dik and Serval were all brought into the collection during the year – species that will all ultimately help to consolidate the African grasslands experience on the west side of the Zoo.

Top: Black Rhino *Emma Elsa* with calf, *Bashira*.

MPT Chyulu – Protection and Monitoring (January - October 2009)

- 460 poachers arrested
- 702 snares, 13 bows and 102 arrows recovered
- 2 jailed for cattle raiding
- 9 elephant tusks recovered
- 65 Game scouts employed
- 28 Maasai students on full wildlife scholarships

Supporting Strategic Objectives:



Saving Chimpanzees in Nigeria

Small Population Conservation

Gashaka Gumti National Park, the largest in Nigeria, is particularly important for primates and is renowned for its diversity. The park holds the last remaining viable population of Nigerian Chimpanzees. A smaller population survives nearby at Ngel Nyake.

Gashaka Primate Project is the main component of the Nigeria programme and Chester Zoo has partnered the project since it began in 1999. Core funding has been provided to support the construction of infrastructure, radio communication, salaries and equipment, including a 4x4 vehicle for access to the park, and construction of a research centre. The project combines research with conservation to understand ecology and primate behaviour – local field assistants are employed to carry out some of this work. Having researchers in the area directly aids conservation by deterring poachers because of their presence. Our core funding also ensures training and education is provided for rangers in the park, and in 2009 training for rangers and students focussed on alternative energy possibilities.

Chester Zoo entirely funded the demarcation of the Nigerian border of Gashaka Gumti National Park – over 200km. The work on the boundary began in 2004, which was required to mark the perimeter of the park in order to control the illegal activity occurring within its border. Communication and ranger access has been improved significantly and allows the rangers to patrol the park more efficiently.

Nigeria has a unique montane forest ecosystem, and support continued for the sixth year for the Nigerian Montane Forest project. The focus of this project is to restore the Ngel Nyaki Forest (one of the most floristically rich forests in the region) and understand its avian pollinators, who help fertilise many plant species. A major component of the project this year was the fencing off of grazed grassland and reforestation through using trees grown in the project nursery. Research is also being carried out into the most effective management of fenced off areas. Chester Zoo's support has provided the project with a herbarium and plant nursery, which grows seed from over 30 tree species from the forest and the collection keeps on growing.

In the Zoo

The majority of the adult females in the chimpanzee troop are now contracepted as part of the recommendations from the European breeding programme. Only one animal was allowed to breed during 2009; Zee Zee gave birth to female baby *Tina* in February. During December, the entire group



of thirty animals was hit by a respiratory virus and bacterial infection which resulted in the death of three individuals. Had it not been for the incredible dedication and hard work of the primate and veterinary teams, there is no doubt that more animals would have been lost.

Gashaka Primate Project highlights

- 10 local staff employed and trained to monitor primate groups
- Training provided to students and GGNP park rangers
- 8 Nigerian students supported through bursaries
- 3 papers published
- 2009 Nigeria-Cameroon Chimpanzee Action Plan Workshop
- First amphibian survey of the lowlands of GGNP

Above: Baby chimpanzee ©Yvonne Phiner;
Below: Roger Wilkinson (Head of Field Programmes and Research) and Mark Pilgrim (Director of Conservation and Education) with Project Manager, Umara Buba



Supporting Strategic Objectives:



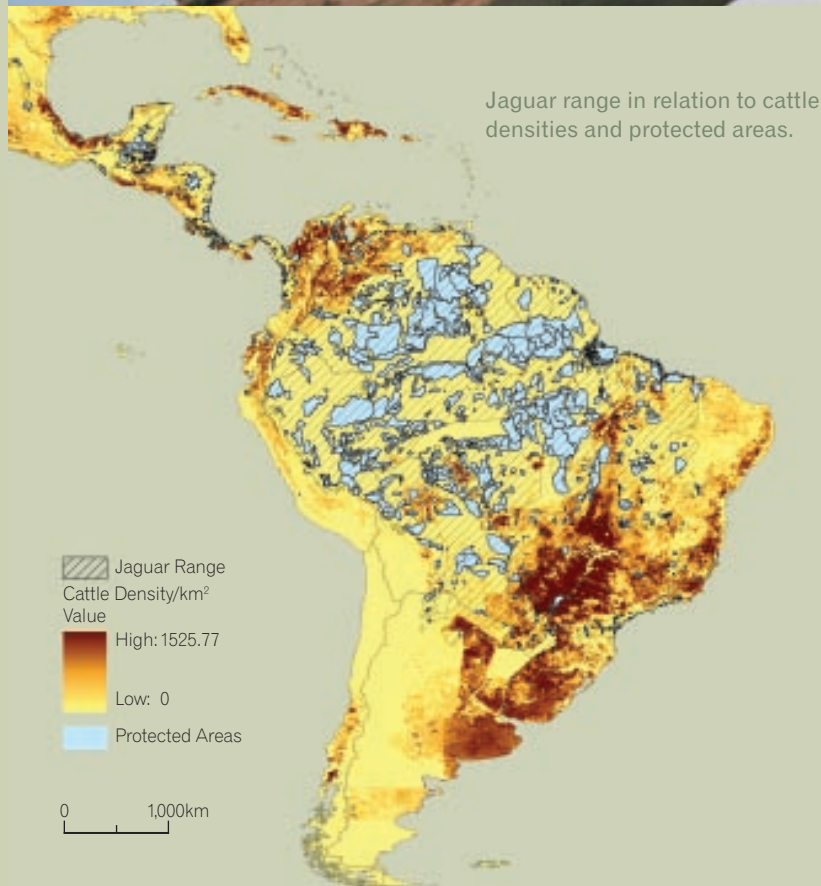
Spirit of the Jaguar

Resolving Jaguar-Rancher Conflict



Human-jaguar conflict is the most serious and widespread threat for the survival of jaguars across Latin America. Few pristine areas remain in which jaguars can survive, protected from the influences and threats presented by human populations. Sixty-five percent of the remaining 11 million km² jaguar range is outside protected areas, and it is here that they come into contact with livestock, on which they occasionally prey and which leads to retaliatory killing by farmers.

65%
of Jaguar range
is outside of
protected area



Chester Zoo together with the Wildlife Conservation Research Unit at Oxford University is conducting extensive research into the factors that shape these conflicts, including geography and human land-use patterns. Using GIS software, we are modelling areas of highest risk. Around 85% of the jaguar range has some overlap with livestock and therefore some potential for conflict with people.

Chester Zoo has also initiated the development of the Jaguar Conservation Network website (www.jaguarnetwork.org), which is a trilingual portal for information and collaboration among jaguar researchers, conservationists, and people affected by predation on livestock.

Meanwhile, Chester Zoo continues to provide grants to other organisations working on Jaguar conservation. In Guatemala, we provided support for a project helping to implement livestock husbandry practices designed to mitigate human-jaguar conflicts in the ranches and villages of La Selva Maya. This year we also supported the production of a Special Issue of *Cat News*, following the National Action Plan workshop for jaguars in Brazil in November 2009. This publication will bring together important information for cat conservation such as action planning and research.

Top: Jaguar

Supporting Strategic Objectives:



Frogs to the Fore

Tackling the Global Amphibian Extinction Crisis



3 'extinct' frogs re-discovered and being studied in Costa Rica

Chester Zoo's commitment to amphibian conservation continued to grow throughout 2009, perhaps most prominently in its support of the Amphibian Ark (AARK).

The Director General chaired the AARK Executive Committee throughout the year and our dedication to the mission of the AARK was further underlined both by financial backing for, and attendance at, the AARK's strategic planning meeting in Al Ain in March.

The Curator of Lower Vertebrates and Invertebrates continued to spend around 20% of his time working as AARK Taxon Officer, co-developing the new Amphibian Conservation Needs Assessment tool and facilitating its use at workshops in Brazil, Chile and Sri Lanka. Following the Sri Lanka workshop he also co-delivered a week-long Amphibian Conservation and Husbandry course with Durrell colleagues, consolidating Chester Zoo's contribution to international training and capacity building in the field of amphibian conservation, and cementing an informal agreement with Durrell to deliver similar workshops elsewhere in the future.

In August the Director General and Curator of Lower Vertebrates and Invertebrates participated in the first Amphibian Mini Summit in London. At this meeting of international amphibian experts, the Amphibian Survival Alliance was conceived – a coalition of partners dedicated

to implementing the global Amphibian Conservation Action Plan, to which the Director General pledged Chester Zoo's support as a founding member.

Amphibian conservation and research was supported both *in situ* and *ex situ* during 2009. In the field, the remarkable and rare Darwin's frog from Chile and the endemic Golden Tree Frog from Trinidad both benefited from research financed by Chester Zoo. In Costa Rica, regular visits to the only reliably known breeding site for the Green-eyed Frog continued to confirm the frog's persistence and provide valuable data. Chester Zoo's Herpetology Specialist Keeper participated in one of these visits to help direct research on this Critically Endangered species and to gain first-hand experience of the species' habits and local climate, both essential for the associated *ex situ* programme with this species at the Zoo.

Husbandry of the Green-eyed Frogs at Chester Zoo was transformed thanks to the generous support of the Oglesby Trust. A brand new Amphibian Pod (APOD) was designed and manufactured locally following the specification of the Chester Zoo herpetology team. This new unit is situated beside, and is attached to, our first APOD at Caughall Farm and provides a dedicated and spacious facility for breeding the frogs in complete,

Left: Black-eyed Tree Frog zoo raised on high carotenoid diet © Douglas Sherriff;
Below: Louis Solano (senior forest warden) and Chester Zoo's Herpetology Specialist Keeper, Douglas Sherriff, in Costa Rica.



Supporting Strategic Objectives:



Conserving British Wildlife

Acting Locally in the Northwest of England



2009 saw implementation of year one of the Count Me In! project (CMI!), generously funded by Heritage Lottery Fund and Esmée Fairbairn Foundation, and run in partnership with rECOrd. An exciting and diverse programme of 11 workshops and 3 family events took place, and feedback has been extremely positive. Approximately 1,000 people have taken part in activities, and 996 wildlife records have been collected as a result of the project.



Several CMI! events were held at the Zoo in 2009; as a result several additional species have been recorded on the Zoo site, including six different ladybirds and Patchwork Leaf Cutter Bee. The 2010 CMI! programme was finalised in November 2009, and will have a particular focus in the Crewe and Nantwich project target area.

Dormouse research in Cheshire and North Wales continued with hedgerow connectivity work facilitated through partnerships with the People's Trust for Endangered Species and the Farming and Wildlife Advisory Group. Environmental monitoring equipment and tree-top nest boxes were installed at the Welsh study site to increase understanding of dormouse habitat requirements.

A significant new partnership project focusing on Lesser Horseshoe Bats in North East Wales was initiated, in partnership with Countryside Council for Wales and Denbighshire County Council. Zoo funding will enable remote monitoring of a breeding roost of this rare and protected species. Zoo IT staff will be involved in the implementation of this project, which aims to produce video footage of wild bats for display in the Zoo as well as improving monitoring and revealing breeding behaviour.



Conservation action for the Barberry Carpet Moth began in 2009 with local sources of the larval food plant Barberry identified. Cuttings were taken in July and December for propagation work. Chester Zoo's function is to provide plants for a large scale habitat restoration initiative of 'Barberry Highways' linking sites where moth reintroduction has taken place or is planned. Main project partners are Natural England, Butterfly Conservation, British Waterways, and several zoos and wildlife trusts.

Chester Zoo's role in local invasive non-native species (INNS) issues increased in 2009, building on previous support for mink control work. Funding was provided for control of alien aquatic plants to protect rare pillwort, and for a portable display - highlighting problematic non-native species in the Cheshire region, for use at public events. The Biodiversity Officer is a member of INNS fora in Cheshire and North Wales; meetings of both groups were hosted at Chester Zoo in 2009.

Chester Zoo continues to host meetings and events for the Cheshire Region Biodiversity Partnership and Zoo staff sit on both the steering group and wider partnership. The Biodiversity Officer also represents the Zoo on the North East Wales Biodiversity Partnership, formed in 2009.

Above, from top: CMI! birdwatch; Lesser Horseshoe Bat ©John Kaczanow; Zoo Junior Members, CMI! event.

Plant conservation projects have diversified significantly in 2009, project details are summarised in the below

Species	Number in Zoo Collection	Plant Source: Origin	Project Aim/s	Number returned to the wild before 2009	Number returned to the wild in 2009	Number for reintroduction in 2010
Black Poplar	60+	Wild: Cheshire Sites	Reintroduction	300+	5	44
Common Juniper	101	Wild: Great Orme Prestatyn Hillside	Reintroduction	20	0	71
Limestone Woundwort	35	Wild: Denbighshire	Reintroduction	130	0	To be confirmed
Welsh Cotoneaster	7	Wild: Great Orme	Propagation research	———— Reintroduction not currently appropriate ————		
Grassrack Pondweed	144	Wild: Montgomery Canal	Research/Insurance Population	———— Reintroduction not currently required ————		
Floating Water Plantain	500+	Wild: Rochdale Canal and others	Research/Insurance Population	———— Reintroduction not currently required ————		
Isle of Man Cabbage	55	Wild: Wirral Coast	Insurance Population	Reintroduction not required	To be confirmed	
MacKays Horsetail	20	Wild: Wirral Coast	Insurance Population	———— Reintroduction not currently required ————		

Supporting Strategic Objectives:



NEZS Conservation Grants

Providing Support for Conservation Projects Across the Globe

Chester Zoo supports a wide range of projects worldwide, and in 2009 we supported over 60 projects. The requests for grant support increase every year, and a new review process was introduced in 2009 to ensure we select those projects which will have the greatest conservation impacts and best complement our current conservation activities. Although fewer individual grants were awarded in 2009 than 2008, our average and total spend on grants increased over this period. A selection of some of the grants from 2009 are as follows:

Birds

With the addition of the Hutan Hornbill Conservation Project to our Realm of the Red Ape Programme, our support for hornbills has increased this year. We have continued our support for hornbill projects in Thailand and South Africa. Our continued support for the Tapoh Conservation Education Centre in Thailand allows the project to increase awareness among local communities of the threatened hornbill species, and support for the Mabula Ground Hornbill Project in South Africa supports re-establishing the hornbill in its historical range.

Mammals

The N/a'an ku sê Carnivore Research Project in Namibia is working to reduce livestock-carnivore conflicts. Data is being gathered to determine the Cheetah densities and home ranges, and find out where the conflicts occur.

Another project focusing on human-wildlife conflict is an African Wild Dog project in Laikipia, Kenya, linking regionally with our Black Rhino Programme. This project is looking at the conflict between the Wild Dogs and local communities due to predation of livestock.

Emergency Funds

Kenya was hit hard in 2009 with devastating droughts in the region, putting immense pressure on local communities. Many people in the area are struggling following the loss of livestock, and the wildlife has also suffered massive losses, with huge numbers of elephants, buffalo, wildebeest and zebra being affected.

Chester Zoo provided much needed emergency funds to the Maasailand Preservation Trust who are helping communities in Kenya following the droughts. This links directly in geography and governance with our Black Rhino Programme protection component in the Chyulus.



Reptiles, Amphibians and Invertebrates

Chester Zoo continued its support for the Philippine Crocodile project, providing funding along with other European Zoos for the Mabuwaya Foundation, and for the Komodo Dragon project on the Wae Wuul Reserve in Indonesia.

A project was supported on the ecology and conservation of the Costa Rican Green-eyed Frog, which involved our Zoo staff in the field research in Costa Rica. The Partula Snail study, working to conserve the remaining endemic partulid snails on French Polynesia, has also involved our staff. This has been continuously supported by Chester Zoo since 2004.

Studentships

Chester Zoo annually offers Zoological/Veterinary Studentships and the Richard Hughes Scholarship, both of which receive a large number of applications.

In 2009, Chester Zoo funded eight studentship projects. These projects varied greatly and

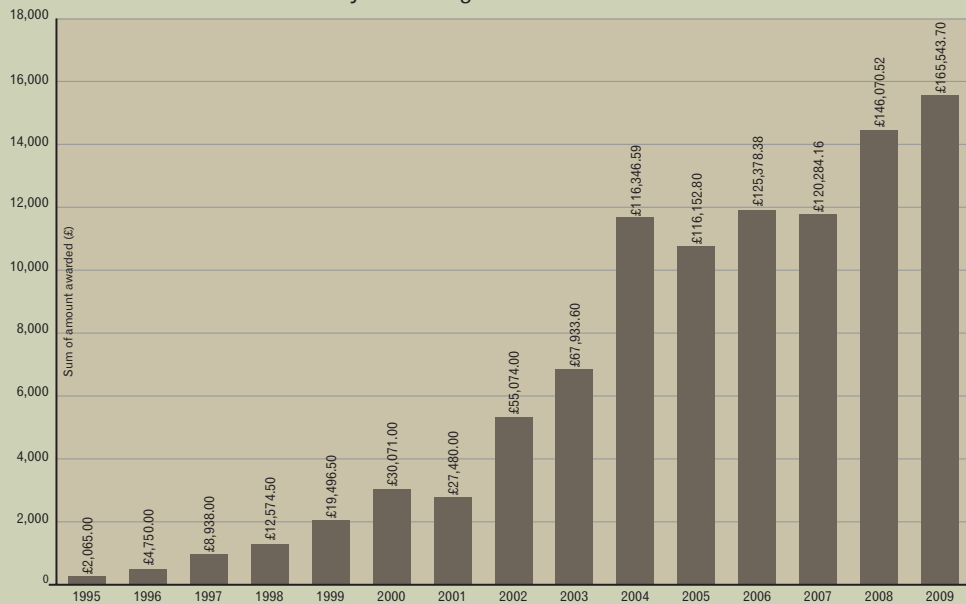
included projects on behaviour in captive Western Lowland Gorillas, play behaviour and social interactions of wild White-bearded Gibbons in Indonesia, the impacts of twice-logged forest on forest bird diversity and community composition in Danum Valley, Borneo and measurement of the health and immunological status of the endangered Mauritius Echo Parakeet.

The Richard Hughes Scholarship invites applications from projects which deal with issues of elephant management, welfare or conservation. This year, the scholarship was awarded to a project in South India titled 'Learning to live with elephants: A novel education programme for local people who live in and around Human Elephant Conflict areas in Karnataka'.

Please see Appendix 7: Worldwide Conservation Activities, for a more comprehensive list of projects supported in 2009.



Conservation Grants - Steadily Increasing



121
grant applications
assessed in 2009

57%
awarded grants

Left to right: Echo Parakeet ©Lara Thick;
 Hornbill research ©Budo Hornbill Project;
 Green-eyed Frogs ©Mark Wainwright;
 Mountain Gorilla ©Sonya P Hill;
 Ground Hornbill ©Mabula Ground
 Hornbill Project.

Supporting Strategic Objectives:



Global Partnerships for Progress

Working With Zoo Associations, Wildlife Organisations and Conservation Agencies Worldwide

Working with WAZA on Strategy

Chester Zoo is an active member of WAZA, The World Association of Zoos and Aquariums (www.waza.org). The Director General served as WAZA President from 2007 - 2009 and helped the organisation move forward on key issues. A 2020 Corporate Strategy Planning Workshop was held in 2009 and the WAZA Council team worked closely with new CEO Dr Gerald Dick to launch this at the 2009 WAZA Congress in Saint Louis. One important decision was to move WAZA headquarters from Bern to Gland in Switzerland to join IUCN, WWF and other major conservation NGOs in the same building. This will facilitate international high-level conservation cooperation.

The Director General presided over the 'WAZA and partners' meeting in Al Ain, United Arab Emirates in March 2009 to chart progress with the WAZA Strategy. He also participated in strategy meetings of the IUCN Conservation Breeding Specialist Group, the International Species Information System, the Amphibian Ark and Amphibian Survival Alliance (see page 22), and joined these and other partners in writing a book *Building a future for wildlife: zoos and aquariums committed to biodiversity conservation*, to be published by WAZA for the 2010 'International Year of Biodiversity'.

WAZA Welfare and Ethics Committee

In July the Director General led a WAZA delegation to Tokyo to discuss dolphin welfare and conservation with the Japanese Association of Zoos and Aquariums. A breakthrough in discussions was made with regard to a formal JAZA commitment to begin a separate, gentler 'herding exercise' as a means of acquisition of wild dolphins for aquariums; versus the controversial drive fisheries currently used for acquisition via commercial dolphin fisheries. Emphasis was placed on the need to develop new, progressively more demanding, benchmarks in dolphin welfare and conservation breeding in JAZA and other aquariums. This is to learn more about dolphin reproduction and also gradually decrease the pressure on wild populations.

WAZA Veterinary and Science Committee

The WAZA-supported 'Frozen Ark' consortium initiative for genome resource banking for conservation and science is progressing well. Chester Zoo is a founder member and developer of 'The Frozen Ark'. This international initiative

centres on building up for conservation and research purposes an ultra-deep-frozen collection of tissue, sperm, DNA and other biological samples taken from endangered species (www.frozenark.org). This involves collaboration between many consortium members worldwide.

There was agreement in principle from WAZA Council for Chester Zoo to broker arrangements for the further development of the international nutritional computer programme 'Zootrition' with the longer-term view of making this software ISIS-ZIMS compatible and transferring custody of the programme to the International Species Information System.

The Chester Zoo veterinary team have led on a Bluetongue Disease Survey in Europe in partnership with the European Association of Zoo and Wildlife Veterinarians and the Zoonosis Research Unit, Liverpool University. This initiative was showcased by WAZA as a prime example of high quality collaborative research that can influence decision makers internationally.

Chester Zoo staff help lead in the European Group on Zoo Animal Contraception. This is an important technique in management of breeding populations, their welfare and genetics. EGZAC works closely with the American Zoo Association Wildlife Contraception Centre. Our Chester Zoo endocrinologist and IT department designed and refined the AZA-WCC contraception database so it can be used to collect data from the EU and allow merging of these data at a global level.

WAZA Aquarium Committee

A major new area of engagement for the zoo and aquarium community is species recovery programmes combined with habitat restoration. The Director General gave a keynote address at the first ever Fish Restoration Conference, hosted by the Aquazoo and Löbbecke Museum, Düsseldorf, September 2009, highlighting the strong complimentary links between *in-situ* and *ex-situ* work conducted in zoos, aquariums, universities, museums, fish hatcheries and wildlife agencies.

A Chester Zoo supported WAZA publication entitled *Turning the Tide: A Global Aquarium Strategy for Conservation and Sustainability* was published in 2009 and launched at the WAZA Congress in Saint Louis. There are key contributions to this document from eminent

aquatic biologists and conservationists worldwide. Keenly anticipated in the zoo and aquarium world, this publication was officially endorsed by the IUCN Species Survival Commission, Conservation International, World Wildlife Fund, Wetlands International and RAMSAR (the International Convention on Wetlands).

Working with Regional Zoo and Aquarium Associations

WAZA has worked to strengthen bonds with the regional associations by inviting representatives as observer members in WAZA Council meetings and creating their own WAZA committee. The Director General engaged in the 16th Annual Association of Zoos and Aquariums in Latin America Annual Conference held in the Republic of Panama and gave a keynote presentation on 'WAZA Partnering with ALPZA and Regional Zoos'. WAZA and Chester Zoo continue to support the development of zoo keeping internationally. The Director General delivered the keynote speech on 'One World, One Zoo, One WAZA' at the 3rd International Congress on Zoo Keeping, September 2009, Seattle, USA. He also chaired ICZ workshops on 'Strategic Planning' and 'Zoo Crisis Management', working alongside Richard Barnett, Paul Howse and Lynsey Jones of the Chester Zoo team.

At the 26th European Association of Zoos and Aquariums Annual Conference in Copenhagen, Denmark the Director General gave a presentation to the EAZA Fish and Aquatic Invertebrate Taxon Advisory Group on 'Aquarium Conservation and Sustainability Programmes and the European Zoo and Aquarium Community' and presented WAZA's new Aquarium Strategy. Zoo colleagues Mark Pilgrim, Kevin Buley, Richard Gibson, Tim Rowlands, Andrew Owen and Andrea Fidgett also attended the Conference and made substantial contributions.

Chester Zoo continues to support many EAZA initiatives including the 2008/2009 'European Carnivore Campaign'. Through Zoo fundraising we pledged 10,000 euros and gained a Gold Award. Campaign aims were to raise awareness of wild European carnivores and conflicts occurring between them and humans. Flagship species include: Brown Bear, European Lynx, Grey Wolf and European vulture.

IUCN Relationships

In January 2009, the Director General attended a Zoo Community/IUCN-Species Survival Commission Meeting at Bristol Zoo, hosted by Dr Simon Stuart, Chair of the IUCN SSC (www.iucn.org/about/work/programmes/species/about_ssc). The Director General and Gerald Dick represented WAZA, alongside Simon Tonge (EAZA and BIAZA), Lesley Dickie (EAZA) and Miranda Stevenson (BIAZA). Dr Simon Stuart's position is financially supported in part by WAZA and in part by Chester Zoo. This meeting was to consider the growing connectivity between IUCN and the zoo associations and discuss future relationships with IUCN as a whole and the IUCN-SSC in particular. A five-year Memorandum of Understanding between WAZA and IUCN was signed, 17th December 2008. The MOU was forged with the aim of increasing conservation synergy and improving access to the relevant research carried out in zoos and aquariums.

The Director General was re-appointed as Global Chair of the IUCN/Wetlands International Freshwater Fish Specialist Group for the next quadrennium. An FFSG Global Freshwater Biodiversity Planning Meeting was subsequently held at Chester Zoo, April

2009. The Executive Committee discussed the FFSG's core strategy and identified priorities, targets and deliverables for the coming year. Wetlands International outlined plans for a new draft Memorandum of Understanding between WI and the FFSG. IUCN and Conservation International gave a progress report on the proposed Global Freshwater Biodiversity Assessment – an initiative to assess many freshwater fishes, molluscs, dragonflies and aquatic plants for the IUCN Red List of Threatened Species™. The group identified opportunities for integrating the work of public aquariums into the GFBA including Chester Zoo working with Zoos South Australia on co-hosting a meeting in Adelaide on conservation of freshwater fishes in Australia.

FFSG Programme Officer, Claudine Gibson, gave presentations and facilitated IUCN Red List training workshops at the 2nd National Training Course on Freshwater Fish Identification and Conservation in the Philippines and also assisted with facilitating an IUCN Red list workshop in China, to assess the conservation of the world's sturgeons.

Climate Change Issues

The Director General was invited to Champion the WAZA/IUCN-CBSG Climate Change Taskforce, alongside Dr Bob Lacy of CBSG.

The Chairman is Paul Pearce-Kelly, London Zoo. Within this framework, Chester Zoo will progress a local climate change public communications agenda in 2010.

The Coral Reef Crisis: Addressing the threats of climate change and ocean acidification conference was held at the Royal Society, London, July 2009 with an introduction by Sir David Attenborough and keynote address by Professor J.E.N. Veron concerning the danger of major ecosystem collapse. Coral reefs are directly impacted by the combined effects of global warming and ocean acidification – and are likely to be placed into a situation of irreversible decline if immediate steps are not taken to reduce carbon dioxide emissions. In December 2009, Parties of the United Nations Framework Convention on Climate Change (UNFCCC) met in Copenhagen to discuss, but did not agree, to greenhouse gas emission reduction targets. The scientific and conservation community has a critical role to play in informing the decision makers involved in the UNFCCC talks about the level of greenhouse gas emissions cuts required to avoid the most severe impacts of climate change and ocean acidification. As WAZA President, the Director General supported the Technical Working Group Statement, advising a target of less than 350 ppm of carbon dioxide.

Conservation and Sustainability

In May 2009, the Director General was kindly invited to Mauritius by the Mauritius Wildlife Foundation. His task in the 'Land of the Dodo', working alongside our Education Programmes Manager Maggie Esson, was to open a Chester Zoo funded Island Restoration Project and Conservation Education Centre on Ile aux Aigrettes.

Several other inter-linked projects to save Critically Endangered endemic plants and animals were viewed and the partnering of zoos and wildlife agencies working together for the complete ecological restoration of habitats was inspirational. Official functions included consultation with the Mauritian President, a meeting with the Director, National Parks and a Reception hosted by the British High Commissioner.



ICZ conference, September 2009, Seattle USA
© Richard Urban, Nuremburg Zoo.

Operating and Developing the Zoo Attraction

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Developing the Animal and Plant Collection

As the animal and plant collection plan for the Zoo continues to evolve through the work of the four curators running the four departments of Zoo Programmes, there has been a concerted effort to link the educational aims and objectives of the Discovery and Learning Division with the specific role of individual species in the collection. This groundbreaking work on Institutional Collection Planning was presented at both the 2009 EAZA and BIAZA conferences and has subsequently been picked up by a number of other leading UK and European zoos.

The establishment of a Training and Enrichment Forum during the year has greatly improved the awareness and capacity of our staff to introduce operant conditioning techniques to some of our key species that have consequently improved their health and welfare. Perhaps most significant in 2009, has been the successful work with our adult bull giraffe *Thorn*. The giraffe team have trained *Thorn* to present his front feet through a specially adapted port hole so that his overgrown hooves can be trimmed. This training has enabled us to avoid having to give him a high risk anaesthetic to perform the foot trim with him unconscious. Training programmes are also now being put in place for our rhinos and big cats.

There have been a number of notable breeding firsts for the Zoo during the year. These included Kirk's Dik Dik, Montserrat Oriole, Golden Conure, Socorro Dove, Mangrove Snake, Mission Golden-eyed Tree Frog and Pasco Poison Dart Frog.

We had another very successful year with our two flamingo species with the rearing of 7 Caribbean flamingos and 10 Chilean flamingos.

We brought in our first female Asiatic Cheetah to join our males in the new enclosure that was opened last year. Also coming into the collection was a new female Spectacled Bear *Franka*, to be paired with our current male *Sangay*. We had our first litter of Bush Dog pups from one of our new females that had arrived at the end of 2008. Born in June, the three young animals are now a superb display with the trio of adults.



There were also significant new importations in the bird collection, with the arrival of two female red Birds of Paradise and two pairs of Critically Endangered Sulphur-crested Cockatoos.

The construction of new off-show conservation breeding aviaries behind the Spirit of the Jaguar building has provided us with some much needed space for many of our most important bird species. With the demolition this year of the out-dated Arcade, Round and Ronald Pryor Aviaries, there is a continuing shortage of bird holding and breeding areas which we hope to address further during 2010. The lack of long-term sustainability of bird breeding programmes in EAZA is an increasingly serious issue and one that will only be solved by more zoos investing in dedicated breeding facilities.

Many of the old reptile enclosures in the Tropical Realm were closed down during 2009. They are being replaced with a lower number of much higher quality exhibits that will be better for both our visitors and animals.

Supporting the Animal Collection

Zoo Programmes and Conservation Medicine staff work closely together and with external partners to ensure excellent standards of animal health, welfare and husbandry. Their activities are audited by the Animal Health, Welfare and Husbandry Sub-Committee of the Conservation and Education Committee – a committee of the Zoo's Council. Some of the key support services are highlighted as follows:

Veterinary Service

Chester Zoo has an in-house team of vets and nurses to provide clinical care to the collection. They are also supported by clinicians and pathologists from Liverpool Veterinary School and other experts as required. As well as providing care for sick animals the vet team also provide preventative healthcare. During 2009 they commenced a major review of our parasite control programme; and progress to date includes screening of over 1,900 faecal samples and financial savings of over £4,000.

Animal Records

Keeping accurate animal records is essential for both effective genetic management of the collection and for providing good husbandry and health care to the collection. In 2009 our system for collating data from the animal teams was refined and this included training of all animal care staff in effective record keeping and use of ARKS. We are also fully prepared to switch over to ZIMS as soon as the new software becomes available.

Animal Moves

Over 1,700 animals were moved in 2009. As well as the logistics of arranging their safe transport, animal health certificates must be obtained and regulations met. On arrival all animals go through quarantine and 2009 saw further refinement of our procedures and the training of a number of staff in the special measures required.

Endocrine Service

Now in its second year, the endocrine service has run faecal hormone analysis on over 6,000 samples in 2009. Routine monitoring of reproductive hormones has enabled us to accurately time breeding in our Black Rhinos and elephants and also to diagnose pregnancy in these and many others species enabling us to adapt our husbandry practices to support animals better through pregnancy and birthing and the post-partum period.

Animal Feeding Programme

The Zoo Nutritionist and Animal Supplies team work closely with the keeping staff to ensure optimal feeding of our animals. In response to the economic down turn, special attention was paid to providing animal diets as cost effectively as possible. Savings of over £20,000 were achieved and ongoing development of new stock management and nutrition software with accounts and IT should enable us to make further savings in 2010.

Supporting Strategic Objectives:



In-Zoo Developments in 2009



Sales of Thirsty Planet water in 2009 funded 28 drinking water pumps in Africa

Other Support Services

Additional services provided by the Animal Supplies Department include management of animal bedding and waste, pest control and training of the emergency response team. Animal operations would grind to a halt without this "behind the scenes" work.

Developing and Operating the Zoo Attraction

2009 saw the Zoo continue its investment and development in commercial operations and Guest Services.

The nine-hole 'Conservation Mini-Golf' opened during the spring of 2009 with each hole representing one of our *in situ* conservation programmes. The attraction offers an activity that all family and friends can take part in together no matter what the age range. The catering kiosk built as part of this development has also performed well.

Easter 2009 saw the opening of the 'Jaguar Coffee House' offering our guests the popular high street quality coffee brand Costa. This is a first for the Zoo in overtly linking directly to a recognised commercial brand on site. The coffee house has pleasingly outperformed budget and is proving to be a popular destination, especially for repeat visitors and members.

Over the past 12 months the Commercial Directorate has made significant changes to minimise the use of palm oil on site. The chemical manufacturing industry is one of the primary users of palm oil. Considering that much of the palm oil used in chemical

products originates from unsustainable sources, we felt that this was a priority area for us to address. We have therefore made changes to the chemicals we use and as we go into 2010, it is pleasing to report that none of the chemicals used in the division contain palm oil. In addition, Catering has also now eradicated palm oil in its cooking oil, all Chester Zoo chocolate products, all crisps, all children's lunch boxes and all ice cream sold on site.

Chester Zoo has become only the second zoo in the country to achieve accreditation from the Marine Stewardship Council (MSC). Diners at the Zoo can enjoy their meals with a clear conscience, after we achieved this new food standard. The chain of custody standard proves that the fish sold in all our restaurants and staff canteen comes from certified, sustainable fisheries.

2009 continued with the planned significant investment in the Zoofari Monorail in terms of presentation, operation and system upgrade. The ticket machines were removed from site and cashiers introduced on the stations to improve the customer service on this attraction and this also enables us to offer single station to station journeys and round trips. The trains have each been themed and we now have a zebra, a tiger, a snake and a giraffe train, providing much improved guest appeal. The system upgrade and project completion is due for Easter 2010.

A new boat and 'live' driver commentary was added to the popular Waterbus experience

during 2009. Due to the good weather at the start of 2009 the attraction opened earlier than in previous years for the February half term and, in part due to early opening and in part due to the great weather in the first six months of 2009 it financially had its best year ever!

As part of continual site improvement, more than 3,500 site maintenance requests were serviced in 2009.

A Zoo-wide customer care training programme was delivered to some 120 front line staff and managers during 2009.

The ever popular Zulu Warriors dance troupe made a welcome return to the Zoo in August and provided a free music and entertainment spectacular for guests to enjoy.

'Festive Fun' at Chester Zoo in 2009 was a much reduced offering than in past years in a deliberate attempt to control costs and evaluate the value of the ice rink and the more traditional aspects of the Zoo's Christmas event. Snow, ice and the coldest Christmas for some 30 years saw a disappointing footfall throughout the school holidays and the reduction in costs proved prudent in this respect. However it is acknowledged that the Zoo does need a 'wow' factor to compete in this competitive trading period and work is underway to secure the wow factor for Chester Zoo for Christmas 2010.

**Left page: Our adult bull giraffe *Thorn* has been trained to present his front feet to allow staff to trim his hooves;
Above: Newly-themed Zoofari Monorail.**

Supporting Strategic Objectives:



In-Zoo Science and Research

Investigations and Evidence in Support of Conservation and Welfare

There is continued growth in the involvement of Chester Zoo staff in scientific studies, both in the Zoo and in the field, as principal investigators, active collaborators, academic supervisors and examiners for first and higher-level degrees.

Some of the research in which our staff has been involved during 2009:

- Supervision of a Zoo-led investigation of an abnormal behaviour, regurgitation and reingestion (R/R), in European zoo-housed apes, including an assessment of diet and feeding on R/R in Western Lowland Gorillas. A European working party was set up on this behaviour.
- Supervision of a Zoo-led collaborative project with the University of Cambridge into the use of environmental enrichment techniques to reduce over-grooming in chimpanzees.
- Supervision of a Natural Environment Research Council (NERC)- and NEZS-funded PhD project (with the University of Manchester) into the role of diet and light on the fitness and fecundity of South American Tree Frogs. Results so far have shown that mate selection is related to skin colour derived from carotenoids, known to confer health and fitness benefits. Another NERC- and NEZS-funded PhD project (with the University of Liverpool), supervised by Zoo personnel, is investigating the impact of variability in reproductive success on long-term health and viability of the European *ex-situ* Black Rhino population.

Investigation into the concurrent relationship between stress-related behaviours, relative changes in adrenal hormone concentrations and health in elephants and primates (gorilla and Barbary Macaque). Other endocrinology studies included:

- Development of a non-invasive practical methods of diagnosing pregnancy, oestrus and parturition in non-domestic Equidae species, Eastern Black Rhino, Okapi and elephants;
- The development of an assay to detect adrenal activity in several species, to assess the impact of the environment or management factors on health and reproduction, in gorilla, Eastern Black Rhino, Asian elephant, Red Eyed Tree Frog, and Blue-throated Macaw;

- Investigations into how transfers between locations for breeding purposes affect behaviour, health and reproduction capacity in the Asian Elephant and Eastern Black Rhino.

For her MSc, Jess Trotter has been conducting an investigation into the causes of an increase in cortisol concentrations which has led to the suppression of oestrus in Chester Zoo's female Asian Elephants.

For her MSc, Lizzie Bowen has been conducting a study into the effect of age on the nocturnal behaviour of zoo-housed Asian Elephants, as well as the effects of hay net enrichment on behaviour.

For his PhD, Mark Pilgrim has been using a multi-disciplinary approach to assess the taxonomic status of the Ecuadorian Amazon parrot, for which he coordinates the European Breeding Programme. This research provides evidence that this endangered parrot currently listed as a subspecies should be treated as a full species, which will give it greater priority for conservation.

For his PhD, Nick Davies used physiological and behavioural measures to assess the welfare of zoo-housed Colombian Black-faced Spider Monkeys. It was shown that Chester Zoo's Spider Monkeys demonstrated a varying stress response to social and environmental factors, but there was no evidence of long-term chronic stressors which are normally associated with poor welfare;

Mary Lherbier has been using behavioural and physiological measures to assess the effects of relocation on three iguana species that will be moving to new enclosures in early 2010.

The Veterinary Team has been involved in an investigation into gastrointestinal parasite surveillance in Chester Zoo's frog species, in collaboration with the Natural History Museum. Not only is this an investigation into potential pathogens, but also to map what is naturally found in our frogs. Other veterinary related research included a field study aimed at validating the Chembio statpak™, a serology test for tuberculosis, in various species of primates. A pilot study was conducted in Vervet Monkeys, and the research will be expanded to apes in 2010.

Education staff have been conducting studies of the relative popularity of zoo animals and the implications for collection planning.

Other education and visitor-based studies included an evaluation of visitor engagement with Presenters in the Twilight Zone and their impact on learning potential and the design of new methods for assessing some of Chester Zoo's field education programmes, such as those in Kenya, Tanzania and Mauritius.

Many Zoo staff also co-ordinate zoo breeding-programmes, manage studbooks, write and review scientific papers and reports, participate in various scientific animal-management and conservation committees for internal and external bodies and present their work at national and international conferences and workshops. In 2009, a member of Zoo staff organised and co-hosted a workshop on 'Implementing the EAZA Research Strategy' at the 11th Annual BIAZA Research Symposium. Chester Zoo staff also gained a prize at the same meeting, for a presentation of a study conducted on inter-specific variation in gut-loading potential of prey items for captive amphibians. During 2009, Chester Zoo staff and associates published or contributed to over 90 scientific, biological and technical publications (see Appendices for a list of some of these key publications). The Director General continues to conduct research in conservation related systematic biology and supervising PhD students. Several of our staff members are recognised by honorary positions within academic institutions, including the Universities of Chester and Liverpool. Research collaborations with our key partners help us in our mission to conserve biodiversity worldwide.

Some of the disciplines in which Chester Zoo staff conduct research:

- Animal behaviour and welfare
- Veterinary issues
- Animal nutrition
- Endocrinology
- Education and visitor studies
- Taxonomy and genetics
- Cryopreservation and biotechnology
- Field conservation research (e.g. research into human/wildlife conflict and UK native species)

Supporting Strategic Objectives:

2 3 4

Discovery and Learning

Engaging People with Nature



Our commitment to meaningful engagement with local communities was a strong theme of our educational activities in 2009. We gained National Lottery funding for our Learning Together programme where single parents and their children came to the Zoo free of charge to take part in a unique family learning experience. The project sought to address key issues for lone parents such as isolation and lack of self confidence and involved fathers as well as mothers. National Lottery advisers were so pleased with the project that they encouraged us to extend it into early 2010 by which time we had worked with 261 families above a target of 250. According to research we conducted, this went a long way to achieving the set objectives.

Although it was a difficult year in terms of schools finding the money for educational outings we nevertheless had 152,452 pupils and students visit, 31,223 being directly taught by our Education Officer team. This represents an overall increase of 9% over 2008 and is reflective, we hope, of the Zoo's continued reputation as a value for money, high quality

educational destination. Interestingly this increase in visitation occurred in a year when we discontinued our traditional schools advertising mail out, replacing it instead with web-based communications.

The excellence of our education programme for schools was recognized by the renewal, after a rigorous site inspection, of our prestigious Sandford Award from the Heritage Education Trust, presented by HRH The Earl of Wessex at a ceremony in Windsor Castle in early 2009. We also successfully satisfied six quality indicators to qualify for Learning Outside the Classroom accreditation, a nationally recognized standard.

The Presenter team had a busy year engaging with our visitors through talks, guided tours, exhibitions and a range of themed activities. During 2009, 344,331 visitors attended 2,494 talks and 180 hours were spent updating visitors with live 'Zoo News' at the entrance. Our presenter-staffed Life on the Lilypad amphibian conservation exhibition in the Joseph Banks Room had a footfall of 97,593 for the year with a total of

211,930 overall during its two year lifespan. The live exhibits which formed the centre of the exhibition were successfully relocated to the Spirit of the Jaguar.

2009 was, of course, the 75th anniversary of the founding of the North of England Zoological Society and the division co-ordinated a series of celebratory events throughout the year, one of which was the unveiling of a 40m banner marking key events over the eight decades of the Zoo's history.

The banner that preceded this one, a series of graphic images of environmental destruction by photographer Mark Edwards illustrating the lyrics of Bob Dylan's 'Hard Rain' was quite controversial in terms of content. Our Educational Research Officer gathered data on the visitors' response to the exhibition which was overall very positive. Other research was conducted into visitor behaviour across the site in keeping with our strategic objective to better evidence the impact of the Zoo's environmental messaging.

344,331
Visitors
attended
2,494
Presenter
talks

Above: Personal 'mind maps' constructed by children in the Learning Together project, were analysed to help us understand what they had learned.

Supporting Strategic Objectives:

3 4 5 6

Marketing and Public Relations

Widening the Catchment Area and Increasing Customer Engagement

A number of exciting marketing and public relations initiatives helped to drive new visitors to the Zoo and increase brand awareness.

The Chester Zoo Shuttle Bus got into gear during the summer and October half term holidays. With promotional support from all the local train operators and the local council and with a public relations message behind it, the animal-branded 13-seater minibus, dubbed 'Tiger', carried 4,800 passengers from Chester Station to the Zoo, a free trip for those with a rail ticket. An on-board survey showed that 85% of passengers said they would pay for this service.

The animals took centre stage across the globe with a number of high profile stories reaching millions of people. The birth of Bella the giraffe made the ITV national news and a heart-warming picture of Whistling ducks using a feather duster as a surrogate 'mum' went world-wide, including America's Washington Post.

There was also television exposure for the wider Zoo. Channel 5's new wildlife series Michaela's Animal Roadshow featured Chester Zoo in two hour-long episodes; the BBC's Hairy Bikers recorded one of their culinary shows from the Spirit of the Jaguar and BBC's prime time programme Tonight's the Night also generated significant coverage and a great deal of interest from the visitors.

The story of a world first – the use of a new designed-stethoscope to check the health of Black rhinos – attracted television and press coverage and the story of how the recording of footprints was helping African Cheetah conservation in Namibia attracted international press.

The opening of the Tsavo National Park Bird Safari was another great opportunity for media exposure.

The long-standing commitment of our valued members and adopters was further recognized with the opening of a new seven-day facility at the main entrance.

The Membership and Adoptions team was expanded and moved to a purpose-built cabin at the main entrance, providing a one-stop shop for members and adopters alike. Having a visible presence at the Zoo entrance has helped to promote our offer and speed



up processing. There has been a steady growth in Membership since August and we finished the year on an all time record high of 34,755 members.

There were a number of other visitor-focused initiatives. A three tier pricing structure was brought in and the volume of '3 for 2' promotions was reduced. These plans were successful and, in tandem with the range of focused marketing communications, helped increase our admission income to a record level.

Digital media also came to the fore as a marketing tool. An E-newsletter was introduced and 50,000 people are now signed up to receive the latest Zoo news and events.

An increasing focus on widening our 'visitor' catchment area in advance of the Natural Vision development paid dividends. With more targeted communications, customized offers, ticket agent recruitment and attendance at trade shows record levels of Group and Ticket Agents sales were achieved. We welcomed over 65,000 'Group' visitors in 2009 – a new record – which was 18% up on 2008. The income generated was up 38% at £622,667. The number of authorized Ticket Agents has

reached 166 and this helped boost ticket agent sales – up 71% on 2008 at 37,050 tickets. Across the wider North West region 290,000 Zoo leaflets were distributed; this included a specific campaign in Yorkshire where 70,000 were distributed to enlarge our customer catchment area.

2009 laid the foundations for new and inspiring marketing and public relations plans which will continue into 2010.

Members	
2008	31,256
2009	34,755

Above: Michaela Strachan with Lemurs at Chester Zoo © Truth North

Supporting Strategic Objectives:



Trusts, Grants and Sponsorship Received

Gaining Substantial Support from External Stakeholders

Aaron & Partners Airbus Arthur Jarvis (legacy) Big Lottery Fund Carbon Trust Celia Russell (legacy) Cheshire Building Society Darwin Initiative The Eric and Dorothy Leach Charitable Trust Esmée Fairbairn Foundation Conlon & Sons (Opticians) Ltd Grosvenor Garden Centre Heritage Lottery Fund Hill Dickinson LLP Jean Dixon (legacy) Kilgraney Marks & Spencer Money North West Development Agency Oglesby Charitable Trust Philip Barker Charity The Rt Hon Baroness Rendell of Babergh, CBE Sir Julian Hodge Charitable Trust Skytrac Solutions Tesco Charity Trust Tetrosyl The Thriplow Charitable Trust Urenco UK Limited



As a key conservation charity much of our vital work would not be possible without the contributions of our partners, volunteers, sponsors and donors. Our sincere thanks go to all who have helped to support our work during 2009, in whatever way.

During 2009 we received funding from a growing number of grant making trusts and foundations for our work both at home and abroad. The Count Me In! Project, in partnership with rECOrd, which focuses on training new wildlife recording volunteers, completed its first year. This was funded generously by the Heritage Lottery Fund and the Esmée Fairbairn Foundation. A total of 602 participants attended 13 events throughout the year from 'Friend or Foe' to 'Spring in the Step'.

Learning Together, our educational project working in conjunction with Gingerbread, ran for the second year funded entirely by The Big Lottery's Family Learning Programme.

A further new education project, Safari Ranger, taking zoo education out beyond the Zoo perimeters and into schools received funding during 2009. Our sincere thanks go to Urenco UK, Philip Barker Charity, Julian Hodge Charitable Trust and Tesco Charity Trust for funding this new and exciting piece of work commencing in 2010.

With the recession, 2009 was a difficult year for the corporate sector yet we continued to receive support from businesses. We are most grateful to Airbus UK for their long-term support of our work, in particular the sponsorship of the Tsavo Bird Aviary which opened this year and relates to our conservation work in Mkomazi, Tanzania. Tetrosyl, under the brand Car Plan, have supported the Zoo this year with the launch of their Rainforest Fresh Air Freshener, from which the Zoo receives a donation from each unit sold.

Our sincere thanks go to all those who have become lifetime supporters, committing to leave a gift to the Zoo in their will enabling us to continue our work and plan for the future.



Above left: Count Me In! Project;
Above right: Rainforest Fresh Car Air Fresheners.

Supporting Strategic Objectives:

4 5

Staffing, Organisation, Structure and Training

The department provides a supportive "first point of contact" service on all staff and organisation related issues. People matters are dealt with under correct procedures to ensure that consistent and accurate advice and guidance is provided. The HR department continue to develop existing and implement new corporate HR policies and practices that reflect business priorities, which are compliant with employment legislation and meet recognized benchmarks of good practice in people management and organisation development.

The HR Department supports and coaches' managers and first line supervisors on a range of people matters helping to ensure individual and team contribution focuses on strategic goal achievement. Individual performance reviews, conducted through regular performance appraisal, ensure training and development needs are regularly assessed. Specific training

support is reviewed and provided to directly support personal development plans which are in place across all functions.

HR continues to provide advice and support on all learning and development matters. There has been a focus this year on vocational training and leadership and supervisory development. We introduced training for both Managers and Supervisors to improve their knowledge of the reports available within the time and attendance system to assist them in monitoring overtime and sickness information. One training event which proved particularly successful was the HR team working in collaboration with ACAS who ran a training course for thirty Managers on "Practical Skills for front line Managers".

During 2009 HR delivered successfully a comprehensive Terms & Conditions review and managed a recruitment freeze which was lifted in September. Both of these initiatives had a big

impact on workload levels, but high standard service delivery across the full range of HR activities was maintained throughout the year.

A high priority for the department has been to better manage sickness absence. The regular review of sickness records and setting up case review meetings, supporting rehabilitation and return to work processes, have all contributed to managing absence more effectively. We continue to engage, when required, the full support of external Occupational Health Provision.

There has been considerable progress made to migrate weekly paid staff to monthly pay, this will be completed by September 2010 when all staff, including seasonal staff, will be paid monthly. As a result savings will be made in administration and banking costs. The permanent headcount at the end of December was 322 employees and in the height of season we employed an additional 214 temporary employees.

Supporting Strategic Objectives:

5

Safety, Health and Environmental Management

Health and Safety

The management of health and safety has moved forward this year with the setting up of a Site Health and Safety Management Committee which meets at least monthly and covers accidents, risk assessments, safety communications and training. The Committee of Representatives for Employee Safety, CRES, has also been re-launched, with a new team. The CRES members have received external training to enable them to complete their roles fully. Chester Zoo also played host to the first health and safety forum for Zoo Health and Safety professionals, a 2 day event which received excellent feedback and which will now run annually, hosted on a round-robin basis at the participating zoo sites.

This year has seen some significant incidents. In July, a number of chimps gained access to staff areas of the Chimp House. As a precautionary measure, the Zoo was evacuated prior to returning the chimps to their own quarters. This was the first time the Zoo has been subject to a full evacuation, and much was gleaned from the experience. Our emergency procedures have been updated as a result.

Accident Statistics

Accident analysis has improved this year, with a new focus on 'Zoo related' accidents, that is, where there is potentially some fault of the Zoo that caused the accident. Of the 283 first aid incidents involving visitors this year, 85% of these had no cause attributable to the Zoo (e.g. many children will trip or fall, simply from the act of playing – this is not regarded as Zoo related). During 2009, there were a total of 38 'Zoo related' accidents involving visitors, and 100 incidents involving employees. Of these, 7 incidents were reportable to the Health and Safety Executive – all involving employees. There were no reportable injuries to visitors this year.

Environmental Management: ISO 14001

This year has seen a move away from support by external consultants for our ISO 14001 Environmental Management system, to taking on board the requirements of ISO 14001 in-house. Eleven members of our Environmental Committee have been trained as internal auditors, and now provide a programme of auditing, as required by ISO 14001. Verification audits must still be undertaken annually by

an external verification body and this was completed satisfactorily in October.

Effluent Discharge Consent

At times of heavy rainfall, we experience high levels of suspended solids in our run off from some of the animal paddocks. The problem is exacerbated by the fact that clay is colloidal in nature and therefore stays in suspension and does not drop out.

Options for reducing suspended solids are being considered. We are in discussion with the EA over a potential new consent level for ammonia and revised limits for suspended solids and Biological Oxygen Demand (BOD).

Energy Management

The Energy conservation and efficiency drive has continued across Site and the projects at the Elephant and Penguin exhibits have reduced energy spend by £38,000 and CO₂ emissions by 132,000kg in 2009. These exhibits featured as the case study at the North West Energy Forums 2009 conference.

The Site now has grid connected solar electric panels (photovoltaic) which complement the previously installed solar hot water array.

Trustees' Report for the Year Ended 31st December 2009

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Presidency



The Right Honourable
Lord Wade of Chorlton



His Grace, The Duke of Westminster,
KG, OBE, TD, DL



The Honourable
Mrs A Margaret Jane Heber-Percy

"It's a very great pleasure to be with you on this, your 75th birthday. My family has had a long association with Chester Zoo. Indeed my aunt, Sally, Duchess of Westminster, sat on your Council for a number of years and took a very keen interest in the Zoo's development. I remember as a small boy having birthday parties here in Oakfield House, under the watchful eye of your founder, George Mottershead. The progress the Zoo has made over the years really is tremendous and it has become a real jewel in the crown of Chester and the North West. None of this would have been possible without the vision, foresight and industry of the Zoo's founding family, the Mottersheads, and the dedication and hard work of the many, many people - trustees, staff and volunteers over the years. Many congratulations to you all on your continued achievements. I wish you every success in the years to come and – Happy Birthday!"

Excerpt from His Grace's speech at Chester Zoo's 75th anniversary dinner, November 2010.



Trustees on the date of this report (left to right): Catherine Buckley, Steve Docking, Brian Child, Dr Simon Dowell, Tony Williams, Prof Peter Wheeler, Robert Mee, Dr Judith Skerritt, Neville Chamberlain, Prof Stefan Buczacki, Rebecca Burke-Sharples, Malcolm Ardron; not present Iain Hall.

Trustees and Governance

Structure

The North of England Zoological Society ("the Society") is a registered charity (Number 306077) and a company limited by guarantee (Number 287902), regulated by its Memorandum and Articles of Association. Its principal and registered office is Cedar House, Zoological Gardens, Caughall Road, Upton by Chester, Chester CH2 1LH.

The Society, also known as Chester Zoo, owns a trading subsidiary company, Chester Zoo Enterprises Limited, whose taxable profits are transferred to the Society via Gift Aid.

The Trustees, as a body of charity trustees, and as directors for the purposes of company law, have general control and management of the administration of the Society. They determine the strategic direction and policies of the Society, with consultation and discussion with the Director General of the Society as Chief Executive and his staff who implement policy. Up to 15 Trustees, who must be members of the Society, are elected by the members at the annual general meeting to serve for a maximum of 6 years. Up to 5 more may also be co-opted by the Trustees, to serve for up to 15 months from being appointed. The Trustees hold at least four formal meetings each year, together with an annual general meeting. The Chairman and Vice Chairman are elected by the Trustees from their current membership, for a period not exceeding three years before re-election for a maximum of one further term not exceeding three years, during which times they are not required to retire in accordance with the 6 year maximum.

Honorary Positions:

President

His Grace, The Duke of Westminster, KG, OBE, TD, DL

Vice Presidents

The Right Honourable Lord Wade of Chorlton
The Honourable Mrs A Margaret Jane Heber-Percy

Trustees on the date of this report and serving during the year:

Elected by the Members

Tony Williams	Chairman
Prof Peter Wheeler	Vice Chairman
Malcolm Ardron	
Prof Malcolm Bennett	(Retired 9th June 2009)
Catherine Buckley	(Elected 9th June 2009)
Rebecca Burke-Sharples CBE	(Elected 9th June 2009)
Neville Chamberlain CBE	
Brian Child	
Steve Docking	
Dr Simon Dowell	(Elected 9th June 2009)
Dr Caroline Evans	(Retired 9th June 2009)
Iain Hall	
Chris Mahon	(Retired 9th June 2009)
Robert Mee	
Dr Judith Skerritt	(Elected 9th June 2009)

Co-opted by the Trustees

Prof Stefan Buczacki (Co-opted 30th Oct 2009)

Chief Executive Officer – Director General

Prof Gordon McGregor Reid

Company Secretary

Alan Sykes

Trustee Committees

The Trustees have delegated aspects of their powers to committees consisting of some of their members, relevant staff and other advisors. These committees report to the Trustees on matters that require their knowledge or approval. The Trustees also receive copies of the full minutes of all committee meetings.

Conservation and Education Committee – prime responsibility for advising the Trustees on all conservation and education matters, in accordance with the mission. An Animal Health, Welfare and Husbandry Sub-committee and an Ethical Review Sub-committee report to this Committee.

Business Operations Committee – prime responsibility for advising the Trustees on all financial, personnel and business matters, in accordance with the Society's strategic objectives.

Remuneration Committee – determines remuneration and conditions of service for directors, heads of division and other key executives.

Trustee Nominations Committee – takes responsibility for identifying and proposing new Trustees, and (if elected) for their subsequent induction, support and development. Reviews the governance structure of the Society and recommend changes to maintain a high standard of Trustees' governance.

The Standing Committee structure at 31st December 2009 is indicated in the table below:

Committees	Conservation and Education	Business Operations	Remuneration	Trustee Nominations	Pension Scheme ⁽¹⁾
Tony Williams, Chairman		x	Chair	x	
Prof Peter Wheeler, Vice Chairman	Chair		x	x	
Malcolm Ardron		x			
Catherine Buckley	x				
Prof Stefan Buczacki	x				
Rebecca Burke-Sharples	x				
Neville Chamberlain		Deputy Chair		Chair	
Brian Child		x			
Steve Docking	x				
Dr Simon Dowell	x				
Iain Hall		x			x
Robert Mee		Chair	x		
Dr Judith Skerritt	x			x	

⁽¹⁾ Not a committee of the Trustees. The Trustees nominate 4 persons (2 others being nominated by members of the Pension Scheme) to act as Trustees of The North of England Zoological Society Superannuation Fund Scheme, established to provide pension benefits to employees of the Society.

Trustees – Recruitment

Each year, the Trustees prepare a list of names of members of the Society that they recommend for election to the Trustee board at the annual general meeting. The Chairman and selected Trustees interview nominees wishing to be elected, considering them against the following characteristics:

- 1) Do they support the aims of the Society?
- 2) What can they contribute to the Society?
- 3) Do their skills enhance or fill any current gaps in the overall skills of the Trustees as a whole?
- 4) Is there a balance in terms of the mix of ethnic, gender and age that reflects the membership?
- 5) Are they eligible by law to fulfil the role of a Trustee of a charity?

Careful consideration in the recruitment of Trustees is vital for ensuring there is a balance of expertise and in particular, a balance between the scientific skills on the one hand and the commercial and business skills on the other. The first is to ensure the scientific activities of the Society fall within the scope of its mission and the second is to ensure the future financial stability and prudent development of the Society.

Trustees – Training

The Society sees the relationship between the executive and the Trustees as fundamental to its success. It is vitally important therefore that the Trustees understand the overall

day-to-day operational activities of the Society. To this end, new Trustees are encouraged to complete an induction tour of the Zoo's various divisions, and to discuss with the heads of division, the role and function of each division, and the part it plays in the fulfilment of the Society's mission.

The relationship between the executive and the Trustees is further enhanced by the formation of ad-hoc joint working parties to consider strategic issues. This is seen to not only develop the Trustees' awareness of the activities of the operational arm of the Society, but is also designed to develop the relationship between the Trustees and the executive management and staff. The combined meeting of Trustees and the executive team at the quarterly meetings of Trustees further enhances this relationship and awareness of operational issues.

Each Trustee is issued with an induction pack on becoming a Trustee that covers their roles and responsibilities and the mission, vision, values, strategy and current plans for the Society. Every Trustee is encouraged to attend an appropriate external training course, covering all aspects of the role and responsibilities of being a charity Trustee.

Trustees' Third Party Indemnity

The Society purchases liability insurance cover for the Society, its Trustees and other officers which gives them appropriate cover against the consequences of any neglect or default on their part.

Risk Management

The Trustees actively review the major risks that the Society faces on a regular basis both generally and specifically, and believe that maintaining free reserves within defined levels (see 'Financial Review', page 39) will provide sufficient resources in the event of most adverse conditions. They also monitor the key financial and internal control systems and examine other operational and business risks to which the Society is exposed and have established systems to mitigate the significant risks identified.

The key risks identified by the Trustees are the economic recession causing running costs to exceed income; failure to change and grow market share; and animal disease causing significant loss of animal stock, restrictions on animal movement, or restrictions on visitor attendance.

The Society took steps to reduce its operating costs in the fourth quarter of 2008 and continues actively to restrain outgoings. It introduces new exhibits each year to attract new visitors, most obviously demonstrated by its Natural Vision plans. It maintains the highest animal welfare and disease surveillance standards to protect its animals.

The Society's Health and Safety Policy is reviewed annually by the Conservation and Education Committee and by the Trustees to ensure that the Health and Safety Management System remains both current and effective.

Advisors

External Advisors to the Conservation and Education Committee

Prof Filippo Aureli
 Prof Malcolm Bennett
 Brian Coles
 Dr Caroline Evans
 Derek Lyon
 John Makinson
 Tim Sibthorp
 Dr Phill Watts

Members of the Animal Health, Welfare and Husbandry Sub-committee of the Conservation and Education Committee

Prof Malcolm Bennett (Chairman)
 Julian Chantrey
 Brian Coles

Members of the Ethical Review Sub-committee of the Conservation and Education Committee

Rebecca Burke-Sharples (Chairman)
 Dr Jeremy Playfer
 Prof Gordon McPhate
 Prof Sarah Andrew

Auditors

PricewaterhouseCoopers LLP, 8 Princes Parade,
 St Nicholas Place, Liverpool L3 1QJ

Solicitors

DTM Legal LLP, Archway House, Station Road,
 Chester CH1 3DW
 Hill Dickinson, 34 Cuppin Street,
 Chester CH1 2BN
 Walker Smith Way, 26 Nicholas Street,
 Chester CH1 2PQ

Bankers

Barclays Bank PLC, 7th Floor, 1 Marsden Street, Manchester M2 1HW
 BlackRock Asset Management Ireland Ltd, J P Morgan House, International Financial Centres Centre, Dublin 1, Ireland
 Lloyds TSB Bank plc, 25Gresham Street, London, EC2V 7HN
 Co-operative Bank, PO Box 101, 1 Balloon Street, Manchester M60 4EP
 Royal Bank of Scotland, PO Box 666, Ashton House, Waterloo Street, Bolton BL1 8FH
 Yorkshire Bank, The Chancery, Spring Gardens, Manchester M2 1YB
Actuaries
 Mercer Human Resource Consulting, Mercury Court, Tithebarn Street, Liverpool L2 2QH

Objectives and Activities

Strategic Objectives

The Society's Vision and Mission are set out on the inside front cover of Zoo Review. Its Charitable objects, as set out in its Memorandum and Articles of Association, are (a) to promote the conservation of the physical and natural environment by promoting biodiversity; and (b) to advance the education of the public on the conservation of the physical and natural world and the promotion of biodiversity; in particular by but not limited to the provision of public education, scientific study and the maintenance of endangered animals, plants and habitats in both protective and natural environments. Its Strategic Objectives are explained in detail on pages 8 and 9.

Review of Activities, Achievements and Performance

Please refer to pages 6 to 34.

Plans for Future Periods

Please refer to page 58.

Public Benefit

The Trustees have complied with the duty in section 4 of the Charities Act 2006 to have due regard to public guidance published by the Charity Commission, including its supplementary guidance on fee charging.

In 2009 over 1,350,000 members of the public enjoyed an educational experience at Chester Zoo. The Society relies on income from admission fees, catering and retail sales and other charges to cover its operating costs but in setting the pricing structure, the Trustees give careful consideration to the accessibility of the Zoo to those on low incomes. The majority of all visitors enjoyed concessionary prices set to encourage visits by children, students, families, senior citizens

and those with disabilities, and over 70,000 received free admission. Fuller details of our prices and discount terms and conditions are available from our website www.chesterzoo.org. Over 110,000 of the concessionary priced student visits had a direct instructive content, of which over 15,000 received free admission. Nearly 32,000 were taught by our staff.

Financial Review

Financial Review

The financial statements have been produced in the format prescribed by the Charity Commission's Statement of Recommended Practice ('SORP 2005').

Incoming resources from visitor-related charitable activities were £13,705,000 (2008: £11,966,000). Resources expended from visitor-related charitable activities were £2,615,000 (2008: £3,786,000) resulting in a surplus from visitor-related charitable activities of £11,090,000 (2008: £8,180,000). These principally comprise visitor admissions to the Zoo, memberships and Gift Aid thereon, monorail and waterbus rides.

Visitor related income increased during the first half year due to a 4% increase in visitors combined with a reduction in promotional discounts. However, visitor numbers fell 6% in the second half year. A cost reduction exercise was introduced late in 2008 to defend the Society from the impact of the recession.

Voluntary income, including donations and Gift Aid on visitor admissions to the Zoo, other donations and legacies and Gift Aid thereon, animal adoptions and associated Gift Aid, and grants were £3,280,000 (2008: £2,783,000). This included grants of £996,000 (2008: £486,000) from North West Development Agency to assist the development of the Society's Natural Vision project.

The trading surplus of Chester Zoo Enterprises Limited was £722,000 (2008: £485,000) arising from its catering and retail activities.

Resources expended on charitable activities, excluding the visitor-related activities, principally on animal and botanical conservation, including grants payable (principally for outreach activities), increased to £10,693,000 (2008: £10,139,000). This represents an increase of 5.5%. The costs of generating voluntary income were £296,000 (2008: £358,000).

Net incoming resources for the year, were £3,625,000 (2008: Net outgoing resources £200,000). An actuarial gain on the pension fund of £1,167,000 (2008 actuarial loss: £1,305,000) resulted in a net increase in funds of £4,792,000 (2008: decrease £1,505,000) which increased the accumulated funds carried forward to £28,337,000 (2008: £23,545,000).

The net cash inflow from net incoming resources was £5,950,000 (2008: £1,872,000). Net interest received from cash on deposit was £61,000 (2008: £379,000). This was utilised to fund net capital expenditure of £3,819,000 (2008: £2,829,000) resulting in a net increase in liquid resources of £2,192,000 (2008: £578,000).

Restricted and Designated Funds

Restricted income funds derive from the Animal Adoption Scheme and from donations, grants and legacies received. Animal adoption income is fully utilised to purchase animal foods, and the remaining restricted funds are put towards a variety of capital projects and outreach activities.

The designated funds principally relate to the Society's capital expenditure programme for the forthcoming year, and to outreach programmes which the Society commits to support over the next three to five years.

Reserves

The Society's reserves may be defined as that part of its unrestricted income funds that are freely available for its general purposes. It therefore excludes those funds that could only be realised by disposing of fixed assets held for charitable use. It is the general policy of the Society to apply towards its objectives as much cash as it reasonably can, without accumulating excessive reserves. The Trustees do not consider it necessary to retain income in respect of the Society's designated fund activities. Whilst these funds have been earmarked by the Trustees for particular purposes or uses, they are not committed or restricted legally.

The Society must have regard to its substantial continuing commitments, in terms of staffing and of its ongoing charitable objectives, and to the difficulty of predicting its precise income in any year. It must have regard to the annual cyclical swings of cash flow and such variable factors as wet weather at peak visitor times, competing attractions in the region, social trends, support for or opposition to zoos in principle, the potential closure of the Zoo to visitors due to contagious disease or other disasters, and varying levels of economic prosperity and employment.

The Trustees consider that reserves at the end of any financial year not exceeding 100% of the total resources expended during the year could properly be regarded as both reasonable and justified. Equally it considers that it would not be prudent to allow such reserves to fall below zero. The Society's reserves at 31st December 2009, as defined above, were £9,208,000 (2008: £6,106,000) which represents 48.6% of total unrestricted resources expended in the year (2008: 26.7%)

Investment Policy

Investment powers are limited to those available under the Society's Memorandum of Association and charity legislation.

The Trustees' objective is, in the normal course of events, to maintain the capital value of the Society's investment assets, whilst allowing the Society to withdraw funds as required. Accordingly, the investments are held in highly liquid sterling assets. The performance of the assets is benchmarked against the 7 day and 3 month London Interbank Bid Rate. The Society has not set a policy on social, environmental and ethical considerations, or on corporate governance. The Trustees monitor the investment performance and the appropriateness of this policy on an ongoing basis.

Statement of Trustees' Responsibilities

The Trustees, who are also directors of The North of England Zoological Society for the purposes of company law, are responsible for preparing the Trustees' Report and the financial statements in accordance with applicable law and regulations.

Company law requires the Trustees to prepare financial statements for each financial year. Under that law the Trustees have prepared the financial statements in accordance with United Kingdom Generally Accepted Accounting Practice (United Kingdom Accounting Standards and applicable law). Under company law the Trustees must not approve the financial statements unless they are satisfied that they give a true and fair view of the state of affairs of the charitable company and of the incoming resources and application of resources, including the income and expenditure of the charitable company for that period. In preparing these financial statements, the trustees are required to:

- select suitable accounting policies and then apply them consistently;
- observe the methods and principles in the Charities SORP;
- make judgements and accounting estimates that are reasonable and prudent;
- state whether applicable UK Accounting Standards have been followed, subject to any material departures disclosed and explained in the financial statements;
- prepare the financial statements on the going concern basis unless it is inappropriate to presume that the company will continue in business.

The Trustees are responsible for keeping adequate accounting records that are sufficient to show and explain the charitable company's transactions and disclose with reasonable accuracy at any time the financial position of the charitable company and enable them to ensure that the financial statements comply with the Companies Act 2006. They are also responsible for safeguarding the assets of the charitable company and hence for taking reasonable steps for the prevention and detection of fraud and other irregularities.

The Trustees are responsible for the maintenance and integrity of the charitable company's website. Legislation in the United Kingdom governing the preparation and dissemination of financial statements may differ from legislation in other jurisdictions.

Disclosure of Information to Auditors

Each of the persons who are Trustees at the date of approval of this report confirms that:

- so far as the Trustee is aware, there is no relevant audit information of which the Society's auditors are unaware;
- the Trustee has taken all the steps that he/she ought to have taken as a Trustee in order to make himself/herself aware of any relevant audit information and to establish that the Society's auditors are aware of that information.

The confirmation is given and should be interpreted with the provisions of section 418 of the Companies Act 2006.

Auditors

The Trustees have decided to review the appointment of the Society's auditors and a resolution concerning the appointment will be proposed at the Annual General Meeting. PricewaterhouseCoopers LLP have held office since 1994 and have indicated their willingness to continue.

Approved by the Trustees and signed on their behalf:

Alan Sykes
Company Secretary
30th April 2010

Independent Auditors' Report to the Members of The North of England Zoological Society

We have audited the financial statements of The North of England Zoological Society for the year ended 31st December 2009 which comprise the Consolidated Statement of Financial Activities, the Consolidated and Charity Balance Sheets, the Consolidated Cash Flow Statement and the related notes. These financial statements have been prepared under the accounting policies set out therein.

Respective responsibilities of trustees and auditors

The Trustees' (who are also the directors of the charity for the purposes of company law) are responsible for preparing the Annual Report and the financial statements in accordance with applicable law and United Kingdom Accounting Standards (United Kingdom Generally Accepted Accounting Practice) and for being satisfied that the financial statements give a true and fair view are set out in the Statement of Trustees' Responsibilities.

Our responsibility is to audit the financial statements in accordance with relevant legal and regulatory requirements and International Standards on Auditing (UK and Ireland). This report, including the opinion, has been prepared for and only for the company's members as a body in accordance with Chapter 3 of Part 16 of the Companies Act 2006 and for no other purpose. We do not, in giving this opinion, accept or assume responsibility for any other purpose or to any other person to whom this report is shown or into whose hands it may come save where expressly agreed by our prior consent in writing.

We report to you our opinion as to whether the financial statements give a true and fair view, have been properly prepared in accordance with United Kingdom Generally Accepted Accounting Practice, and have been prepared in accordance with the Companies Act 2006. We also report to you whether in our opinion the information given in the Trustees' Annual Report is consistent with the financial statements.

In addition we report to you if, in our opinion, the company has not kept adequate accounting records, if the company's financial statements are not in agreement with the accounting records and returns, if we have not received all the information and explanations we require for our audit, or if certain disclosures of trustees' remuneration specified by law are not made.

We read the other information contained in the Annual Report, and consider whether it is consistent with the audited financial statements. This other information comprises only the Trustees' Report, the Chairman's Statement and the Director General's Review and all of the other information listed on the contents page. We consider the implications for our report if we become aware of any apparent misstatements or material inconsistencies with the financial statements. Our responsibilities do not extend to other information.

Basis of audit opinion

We conducted our audit in accordance with International Standards on Auditing (UK and Ireland) issued by the Auditing Practices Board. An audit includes examination, on a test basis, of evidence relevant to the amounts and disclosures in the financial statements. It also includes an assessment of the significant estimates and judgments made by the trustees in the preparation of the financial statements, and of whether the accounting policies are appropriate to the group's and the company's circumstances, consistently applied and adequately disclosed.

We planned and performed our audit so as to obtain all the information and explanations which we considered necessary in order to provide us with sufficient evidence to give reasonable assurance that the financial statements are free from material misstatement, whether caused by fraud or other irregularity or error. In forming our opinion we also evaluated the overall adequacy of the presentation of information in the financial statements.

Opinion

In our opinion:

- the financial statements give a true and fair view of the state of the group's and parent company's affairs as at 31 December 2009 and of the group's incoming resources and application of resources, including its income and expenditure and cash flows, for the year then ended;
- the financial statements have been properly prepared in accordance with United Kingdom Generally Accepted Accounting Practice;
- the financial statements have been prepared in accordance with the Companies Act 2006; and
- the information given in the Trustees' Annual Report is consistent with the financial statements.

Karen Bluff (Senior Statutory Auditor)
For and on behalf of
PricewaterhouseCoopers LLP
 Chartered Accountants and Statutory
 Auditors
 Liverpool
 30th April 2010

Finance Statements

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Consolidated Statement of Financial Activities

(incorporating an income and expenditure account) for the year ended 31st December 2009

	Notes	Unrestricted funds £'000	Restricted funds £'000	Total 2009 £'000	Total 2008 £'000
Incoming Resources					
Incoming resources from charitable activities	2				
Animals and botanical collection		13,728	–	13,728	12,042
Education and research		121	–	121	64
Incoming resources from general funds					
Voluntary Income	3	2,006	1,274	3,280	2,783
Activities for generating funds					
Subsidiary's trading turnover	4	6,904	–	6,904	7,015
Other		5	–	5	52
Investment Income	5	61	–	61	379
Other incoming resources					
Pension finance net income	21	–	–	–	60
Total incoming resources		22,825	1,274	24,099	22,395
Resources Expended					
Resources expended on charitable activities	7				
Animals and botanical collection		11,508	186	11,694	12,538
Education and research		534	174	708	724
Outreach		817	9	826	663
Costs of generating funds					
Costs of generating voluntary income		296	–	296	358
Fundraising trading					
Subsidiary's cost of goods sold and other costs	4	6,182	–	6,182	6,530
Other		–	–	–	6
Governance costs		324	–	324	259
Other resources expended					
Pension finance net cost	21	80	–	80	–
Natural Vision expenditure		–	–	–	894
Irrecoverable VAT		364	–	364	623
Total resources expended	6	20,105	369	20,474	22,595
Net incoming / (outgoing) resources before other recognised gains & losses	8	2,720	905	3,625	(200)
Other recognised gains and losses					
Actuarial gain/(loss) on defined benefit pension scheme	21	1,167	–	1,167	(1,305)
Net movement in funds		3,887	905	4,792	(1,505)
Reconciliation of funds	17	–	–	–	–
Total funds brought forward		23,331	214	23,545	25,050
Total funds carried forward		27,218	1,119	28,337	23,545

The above results are all in respect of continuing operations.

No statement of total recognised gains and losses has been prepared as all such gains and losses have been included above.

Balance Sheets as at 31st December 2009

	Notes	Consolidated		Society	
		2009 £'000	2008 £'000	2009 £'000	2008 £'000
Fixed assets					
Tangible assets	11	18,010	17,225	17,946	17,123
Investment in subsidiary company	12	–	–	–	–
		18,010	17,225	17,946	17,123
Current assets					
Stocks	13	424	478	142	182
Debtors	14	1,707	1,234	1,945	1,363
Short term investments	15	5,572	7,519	5,572	7,519
Cash at bank and in hand		5,013	874	5,013	874
		12,716	10,105	12,672	9,938
Creditors: amounts falling due within one year	16	(1,825)	(1,927)	(1,723)	(1,673)
Net current assets		10,891	8,178	10,949	8,265
Total assets less current liabilities		28,901	25,403	28,895	25,388
Net assets before net pension liability		28,901	25,403	28,895	25,388
Net pension liability	21	(564)	(1,858)	–	–
Net assets		28,337	23,545	28,895	25,388
Funds employed					
Income funds – restricted	17	1,119	214	1,119	214
Income funds – unrestricted					
Designated funds	17	1,792	1,938	1,792	1,938
Pension reserve	17	564	1,858	–	–
Other charitable funds	17	24,862	19,535	25,984	23,236
		27,218	23,331	27,776	25,174
Total funds employed	17	28,337	23,545	28,895	25,388

The financial statements on page 42 to 57 were approved by the Trustees on 30th April 2010 and signed on their behalf by:

Tony Williams,
Chairman of Trustees

Robert Mee,
Chairman of Business Operations Committee

Consolidated Cash Flow Statement for the Year Ended 31st December 2009

	2009 £'000	2008 £'000
Net cash inflow from net incoming resources		
Net incoming/(outgoing) resources	3,625	(200)
Net interest receivable	(61)	(379)
Depreciation charge	3,109	3,178
Decrease/(increase) in stocks	54	(52)
Increase in debtors	(473)	(604)
(Decrease)/increase in creditors due within one year	(177)	58
Difference between pension charge and cash contributions	(127)	(129)
	5,950	1,872
Returns on investment and servicing of finance		
Interest received	61	379
Capital expenditure and financial investment	(3,819)	(2,829)
Payments to acquire tangible fixed assets	(3,819)	(2,829)
Management of Liquid resources		
Decrease in short term investments	1,947	621
Increase in net cash in the year	4,139	43

Analysis of changes in net funds during the year

	Balance at 1st January 2009 £'000	Cash flow £'000	Balance at 31st December 2009 £'000
Cash			
Cash at Bank and in hand	874	4,139	5,013
Movement in liquid resources	7,519	(1,947)	5,572
Total net funds	8,393	2,192	10,585

Principal Accounting Policies

The following accounting policies have been applied in dealing with items that are considered material in relation to the financial statements of The North of England Zoological Society ("the Society"). They are consistent with those adopted in the financial statements for the prior year.

Basis of Preparation

The financial statements have been prepared on a going concern basis under the historical cost convention and in accordance with applicable accounting standards in the United Kingdom, the Charity Commission's Statement of Recommended Practice 'SORP 2005', the Charities Act 2006 and the Companies Act 2006.

Consolidation

The consolidated statement of financial activities (SOFA), consolidated balance sheet and consolidated cash flow statement include the financial statements of the Society and its subsidiary undertaking, Chester Zoo Enterprises Limited, made up to 31st December 2009 and comply with recommended practice for accounting by charities. The results of the subsidiary are consolidated on a line by line basis. The charity has availed itself of Schedule 4 of the Companies Act 2006 and adapted the Companies Act formats to reflect the special nature of the charity's activities. No separate SOFA has been presented for the charity alone as permitted by Section 408 of the Companies Act 2006 and paragraph 397 of the SORP.

Funds Employed

All funds employed must be expended in furtherance of the objects of the Society. Restricted income funds must be used in furtherance of some specific aspect of those objects.

Designated funds are those which have been set aside by the Trustees out of unrestricted funds for identifiable future expenditure, but the designation has an administrative purpose only and does not legally restrict the Trustees' discretion to apply the funds.

Incoming Resources

In accordance with the SORP, all incoming resources, including Gift Aid, becoming receivable by the Society during the year are recognised in the SOFA, regardless of their source or of the purpose to which they are to be put or have been put. The one exception to this is membership income and the associated Gift Aid which is treated as deferred income to the extent that it relates to a service to be provided in the following financial year and is potentially refundable.

Where income is restricted to a specific purpose, as specified by a donor, the income is included in restricted funds. Legacies are recognised when payment is received or assets transferred. Grants are recognised when there is entitlement, conditions have been met, and there is certainty of receipt.

Grant Income

Grant income received in respect of capital expenditure is accounted for in line with Paragraphs 110 - 111 of the Statement of Recommended Practice for Charity Accounting and is reflected in the SOFA when the income is received.

Resources Expended

The Society's systems analyse expenses departmentally. Expenditure is recognised when a liability is incurred, and is allocated in accordance with the main activity of the staff concerned or the substance of the costs incurred, including expenditure on charitable activities and on generating funds, and departments providing support services.

Support costs such as management and administration, information technology and property maintenance are incurred in support of activities undertaken to meet the objects of the Society. In accordance with the SORP, support costs have been allocated to charitable activities and fundraising, apportioned by usage according to relative cost driving activities.

VAT

Visitor admission income is treated as VAT exempt and accordingly, as a partially exempt body, the Society may not recover all VAT incurred on costs, with the exception of VAT incurred in connection with the catering, retail, and seasonal event operations, which operate through the trading subsidiary. The cost of irrecoverable VAT is disclosed separately on the SOFA under other resources expended.

Investments in subsidiary undertakings

These are included at cost less any provision for impairment.

Fixed Assets

Fixed assets are included in the balance sheet at historic purchase cost less accumulated depreciation.

Principal Accounting Policies (continued)

Assets in Course of Construction

Directly attributable costs associated with Natural Vision are capitalised where there is expected to be a future economic benefit arising from the expenditure incurred, in accordance with FRS15.

Depreciation is not provided on assets in the course of construction.

Freehold Properties

Depreciation is provided on freehold properties excluding land at 2% or 10% per annum. Freehold land is not depreciated.

Special Buildings, Enclosures, Equipment and Monorail System

Depreciation is provided at rates varying between 4% and 25% per annum, estimated to write off each asset over the term of its useful life. The rates and method of depreciation are consistent with those used in previous years.

Animals

No annual assessment is made of the value of the animal collection. It is valued consistently at a nominal sum and not depreciated.

Purchases during the year are treated as revenue transactions.

Leases

Where the Society enters into a lease which entails taking substantially all the risks and rewards of ownership of an asset, the lease is treated as a finance lease. The asset is recorded in the balance sheet as a fixed asset and is depreciated over its estimated useful life. Future instalments under such leases, net of finance charges, are included within creditors. Rentals payable are apportioned between the finance element, which is charged to the SOFA as interest, and the capital element, which reduces the outstanding obligation for future instalments. All other leases are operating leases and the rental charges are taken to the SOFA as incurred.

Stocks

Stocks are valued at the lower of cost and estimated net realisable value. Where necessary, provision is made for obsolete, slow moving and defective stocks.

Pensions

The Society operates two voluntary pension schemes.

1. The Society makes contributions to a defined contribution pension scheme for certain staff members. The cost of these contributions is charged to the SOFA when incurred. The assets of the scheme are held in an independently administered fund.
2. The Society also operates a defined benefit pension scheme to provide benefits to certain staff members based on final pensionable pay. This pension scheme is closed to new members. The assets of the scheme are held in trustee-administered funds completely independent of the Society's finances.

The cost of benefits accruing during the year in respect of current and past service is included within staff costs. The net aggregate value of the investment return on the scheme's assets and the increase in the present value of the scheme's liabilities, arising from the passage of time, are included in the SOFA in either other incoming resources or in other resources expended. Actuarial gains and losses are recognised in the net movement in funds in the SOFA.

The balance sheet includes the deficit in the defined benefit scheme taking assets at their year end market values and liabilities at their actuarially calculated values discounted at the current rate of return on a high quality corporate bond of equivalent term and currency to the liability.

In respect of the unconsolidated Society accounts, contributions made to the defined benefit scheme during the year cannot be identified on a consistent and reasonable basis, as two employers participate in the scheme, and as such contributions made to the scheme during the year have been accounted for as if they were to a defined contribution scheme and charged to the profit and loss account as incurred.

Grant-making

Liabilities relating to grants are recognised once the Society is irrevocably committed to the provision of the grant.

Notes to the Financial Statements for the year ended 31st December 2009

1. Status

The Society is a company limited by guarantee and has no share capital. Members have guaranteed the liabilities of the Society to the extent of £1 each in the event of the charity being wound up. The Society is registered with the Charity Commission Number 306077. As a registered charity, the Society is entitled to claim exemption from the charge to tax on income and chargeable gains in Section 505 Income and Corporation Tax Act 1988 and Section 256 Taxation of Chargeable Gains Act 1992. Any commercial activity which falls outside the statutory exemption for the purposes of corporation tax is conducted through Chester Zoo Enterprises Limited, which transfers all its taxable profits annually to the society via Gift Aid. In the opinion of the Trustees, no corporation tax liability arose in respect of the Society's activities in the year.

2. Incoming resources from charitable activities

	Visitor related £'000	Other unrestricted £'000	Other designated £'000	Total 2009 £'000	Total 2008 £'000
Animals and botanical collection					
Visitor admission to Zoo and gardens	11,478	–	–	11,478	9,869
Monorail and boats	412	–	–	412	494
Membership of Zoo and Gift Aid thereon	1,546	–	–	1,546	1,492
Other	149	109	34	292	187
Animals and botanical collection total	13,585	109	34	13,728	12,042
Education and Research	120	1	–	121	64
Total incoming resources from charitable activities	13,705	110	34	13,849	12,106

3. Voluntary income

	Total 2009 £'000	Total 2008 £'000
Donations and Gift Aid on admission to Zoo	1,680	1,665
Other donations and legacies, and Gift Aid thereon	100	305
Animal adoptions and Gift Aid thereon	226	222
Grants	1,274	591
Total voluntary income	3,280	2,783

Grant income of £996,000 received from the North West Development Agency as a contribution towards the expenditure incurred during the year on the Natural Vision Project has been treated as restricted income (2008: £486,000 treated as unrestricted income). The figure for 2009 also includes £75,000 received from the Big Lottery Fund for the Learning Together project.

Notes to the Financial Statement for the year ended 31st December 2009 (continued)

4. Activities for generating funds – Trading by subsidiary company

The Society has a wholly owned trading subsidiary, Chester Zoo Enterprises Limited, incorporated in the UK (representing an investment of £100 in ordinary £1 shares) which operates the catering and retail activities of the Zoo from outlets rented from the Society, and certain seasonal events. It transfers its taxable profit via Gift Aid to the Society. A summary of its trading results is shown below.

Audited financial statements for the year ended 31st December 2009 will be filed with the Registrar of Companies. Its aggregate assets, liabilities and funds at the year end were £365,774, £353,336 and £12,438 respectively.

Chester Zoo Enterprises Limited trading results	Catering £'000	Shops £'000	Total 2009 £'000	Total 2008 £'000
Incoming resources				
Turnover	4,220	2,684	6,904	7,015
Resources expended				
Direct costs				
Labour and cost of goods sold	–	–	(4,790)	(5,074)
Operating overhead costs	–	–	–	(80)
Gross trading surplus for year	–	–	2,114	1,861
Indirect costs				
Operating and support costs paid to Society	–	–	(830)	(822)
Property rents paid to Society	–	–	(562)	(554)
Net trading surplus for year	–	–	722	485
Other (costs)/income				
Interest paid	–	–	–	(47)
Amount transferred to Society via Gift Aid	–	–	(731)	(437)
Deferred taxation	–	–	6	–
(Deficit)/surplus retained in subsidiary	–	–	(3)	1

Turnover of £6,904,000 is included in the consolidated statement of financial activities within Activities for generating funds – Subsidiary's trading turnover. Direct and indirect costs of £6,182,000 are included within Fundraising trading – Subsidiary's cost of goods sold and other costs.

5. Investment Income

	Total 2009 £'000	Total 2008 £'000
Income from short term investments	60	373
Bank interest receivable	1	6
Total Investment Income	61	379

6a. Analysis of total resources expended

	Staff Costs £'000	Other Direct Costs £'000	Support Costs £'000	Total 2009 £'000	Total 2008 £'000
Resources expended on charitable activities	–	–	–	–	–
Animals and botanical collection	4,033	5,753	1,908	11,694	12,538
Education and research	365	145	198	708	724
Outreach	201	597	28	826	663
Total for Society	4,599	6,495	2,134	13,228	13,925
Costs of generating funds					
Costs of generating voluntary income	124	45	127	296	358
Fundraising trading	–	–	–	–	6
Total for Society	124	45	127	296	364
Subsidiary's cost of goods sold and other costs	1,831	3,558	793	6,182	6,530
Total for group	1,955	3,603	920	6,478	6,894
Governance costs	228	96	–	324	259
Other resources expended					
Pension finance net cost	80	–	–	80	–
Natural Vision expenditure	–	–	–	–	894
Irrecoverable VAT	–	364	–	364	623
Total resources expended for Society	5,031	7,000	2,261	14,292	16,065
Total resources expended for group	6,862	10,558	3,054	20,474	22,595

Resources expended on the charitable activity of animals and botanical collection include costs associated with marketing, administration of Society membership, and provision of guest services and amenities of £2,615,209 (2008 £3,786,129).

Education includes costs of direct teaching, and costs of producing interpretative and interactive models and signage related to the animals and botanical collection, as well as supporting publication of International Zoo News.

Outreach includes grant-making, administration of grant-making processes and monitoring of related outcomes.

Costs of generating voluntary income comprise costs of the fundraising department, including administrative salaries and wages, costs of appeal mailshots, inserts and e-mails, and collection of authority to collect Gift Aid on Zoo admission fees and donations, and administration and recognition costs related to the animal Adoption scheme.

Governance costs include those costs incurred in the governance of the charity and its assets and are primarily associated with constitutional and statutory requirements.

Costs associated with Natural Vision are capitalised when they meet the criteria set out in the accounting policy in relation to Assets in the Course of Construction.

Notes to the Financial Statement for the year ended 31st December 2009 (continued)

6b. Analysis of support costs

	Total 2009 £'000	Total 2008 £'000
Staff Costs	2,139	1,796
Other Costs	915	1,292
Total of support costs	3,054	3,088

Support costs have been allocated to the activities set out in note 6a on the basis of their usage of cost driving activities attributable to each support service, as follows:

Support cost breakdown by activity	Animals and botanical collection £'000	Education and Research £'000	Outreach £'000	Generating voluntary income £'000	Subsidiary £'000	Total £'000
Personnel, Payroll Office and Reception	154	20	3	15	106	298
Information Technology	191	24	5	19	131	370
Directorate and Central Services	495	63	12	49	228	847
Finance Department	121	10	–	17	85	233
Cash Office	56	3	1	8	34	102
Security and Facilities	132	7	2	19	80	240
Maintenance Department	385	71	6	–	128	590
Estates and Project Planning	374	–	–	–	–	374
Total	1,908	198	29	127	792	3,054

7. Grants payable in furtherance of the charity's objects

Resources expended on charitable activities include institutional grants made by the Society payable in furtherance of the charity's objects, for conservation outreach, research and animal welfare projects. More detail is given on page 24.

Analysis	Grants to institutions £'000	Grants to individuals £'000	Total 2009 £'000	Total 2008 £'000
Animal and botanical collection - Studentships	–	17	17	8
Education and research - Education grants	19	–	19	35
Outreach - Conservation programmes	497	36	533	445
Outreach - Other grants	75	2	77	47
Total grants payable	591	55	646	535

8. Net incoming/(outgoing) resources before other recognised gains and losses

	Total 2009 £'000	Total 2008 £'000
This is after charging:		
Services provided by the Society's auditors		
Fees payable for the audit of the charity and consolidated accounts	12	12
Fees payable for the audit of the subsidiary	6	6
Depreciation of tangible fixed assets	3,109	3,178
Operating lease charges - plant and equipment	4	4

9. Trustees' remuneration

The Trustees, being charity Trustees, received no remuneration (2008: £Nil). No Trustees (2008: None) were reimbursed during the year for travelling expenses necessarily incurred.

Insurance costing £1,773 (2008: £1,706) has been taken out by the Society to protect the Society, its Trustees and other Officers against the consequences of any neglect or default on their part.

10. Employee Costs

	Total 2009 £'000	Total 2008 £'000
Wages and Salaries cost	7,840	7,473
Social security cost	659	658
Pension cost:		
Defined Benefit pension scheme, including Life Assurance	407	463
Defined Contribution pension scheme	30	21
Total employee costs	8,936	8,615

The number of employees, including those employed for only part of the year, whose emoluments for the year (excluding pension contributions) fell within each band of £10,000 from £60,000 upwards is shown below. These employees also had benefits accruing to them under the Society's defined benefit pension scheme.

	2009 Number	2008 Number
From £80,001 to £90,000	2	1
From £60,001 to £70,000	2	2

The average number of persons (full time equivalents (FTE)) employed by the Society during the year was as follows:

	2009 Number	2008 Number
Animals and botanical collection	187	190
Education and Research	18	18
Outreach	4	4
Fundraising		
Society	6	6
Subsidiary trading	114	110
Support and Governance	64	64
Total FTE employees	393	392

Notes to the Financial Statement for the year ended 31st December 2009 (continued)

11. Tangible Fixed Assets	Assets in course of construction £'000	Freehold Property £'000	Buildings and enclosures £'000	Machinery and equipment £'000	Animals £'000	Total £'000
Cost						
At 1st January 2009	–	3,339	26,931	1,292	1	31,563
Additions	2,404	–	1,419	71	–	3,894
Disposals and retirements	–	–	(3,560)	(62)	–	(3,622)
At 31st December 2009	2,404	3,339	24,790	1,301	1	31,835
Depreciation						
At 1st January 2009	–	1,538	12,211	589	–	14,338
Charge for the year	–	256	2,621	232	–	3,109
Disposals and retirements	–	–	(3,560)	(62)	–	(3,622)
At 31st December 2009	–	1,794	11,272	759	–	13,825
Net book value						
At 31st December 2009	2,404	1,545	13,518	542	1	18,010
At 31st December 2008	–	1,801	14,720	703	1	17,225

The Trustees consider that the Society holds no fixed assets for investment purposes. Whilst some of the fixed assets do yield a rental income, they were not acquired for that purpose but to facilitate the operation of the Zoo, which is the primary charitable purpose of the Society.

Assets in course of construction relate to capitalised costs in relation to the Natural Vision project. The Society has received matched funding from the Northwest Development Agency in relation to these assets (see note 3).

Assets of the Monorail system, included within Machinery and Equipment, with a cost of £1,174,000 and a net book value of £nil are held under a peppercorn rent finance lease.

The Trustees consider that it is not meaningful to consider the market value of most of the Society's land and buildings. Such assets are necessary to the operation of the Zoo, which is the primary charitable purpose of the Society. Where an assessment can be made, the Trustees considers that the market value exceeds the book value.

Animal purchases of £18,083 (2008: £8,993) and have been treated as revenue transactions.

All the tangible fixed assets included in the consolidated statement above relate entirely to the Society with the exception of the machinery and equipment where the equivalent figures for the Society alone are:

Society – machinery and equipment	Cost £'000	Depreciation £'000	Net Book Value £'000
At 1st January 2009	1,106	(505)	601
Additions	71	–	71
Charge for the year	–	(194)	(194)
At 31st December 2009	1,177	(699)	478

12. Investments

	2009 £	2008 £
Investment in Chester Zoo Enterprises Limited	100	100

13. Stocks

	Group		Society	
	2009 £'000	2008 £'000	2009 £'000	2008 £'000
Goods for resale	320	383	57	108
Consumables	104	95	85	74
Total	424	478	142	182

14. Debtors: amounts falling due within one year

	Group		Society	
	2009 £'000	2008 £'000	2009 £'000	2008 £'000
Trade debtors	113	107	99	70
Amount owed by subsidiary undertaking	–	–	252	212
Other debtors	146	233	146	233
VAT recoverable	1,268	455	1,268	455
Prepayments and accrued income	180	439	180	393
Total	1,707	1,234	1,945	1,363

Amounts owed by the subsidiary are unsecured, interest free and repayable on demand.

15. Short term investments

	Group		Society	
	2009 £'000	2008 £'000	2009 £'000	2008 £'000
BlackRock Asset Management Ireland Limited funds	5,572	7,519	5,572	7,519
Total	5,572	7,519	5,572	7,519

16. Creditors: amounts falling due within one year

	Group		Society	
	2009 £'000	2008 £'000	2009 £'000	2008 £'000
Trade creditors	751	753	674	605
Other taxes and social security costs	200	157	200	135
Accruals	233	478	208	394
Deferred income	641	539	641	539
Total	1,825	1,927	1,723	1,673

Notes to the Financial Statement for the year ended 31st December 2009 (continued)

17. Movement in consolidated funds	Balance at 1st January 2009 £'000	New funds 2009 £'000	Funds utilised 2009 £'000	Balance at 31st December 2009 £'000
Restricted income funds				
Animal collection	104	161	(186)	79
Education	106	109	(174)	41
Outreach	4	8	(9)	3
Natural Vision grant funding (see note 3)	–	996	–	996
	214	1,274	(369)	1,119
Designated funds				
Animal collection	1,103	715	(1,103)	715
Education	18	–	–	18
Outreach	41	922	(533)	430
Other capital projects	776	485	(632)	629
	1,938	2,122	(2,268)	1,792
Pension reserve	1,858	407	(1,701)	564
Other charitable funds	19,535	20,296	(14,969)	24,862
Total group funds employed	23,545	24,099	(19,307)	28,337

Movement in Society funds

All the restricted funds and designated funds included in the consolidated statement above relate entirely to the Society. The equivalent figures for other charitable funds and total funds employed for the Society alone are:

Other charitable funds	23,236	14,530	(11,782)	25,924
Total Society funds employed	25,388	17,926	(14,419)	28,835

18. Analysis of group net assets between funds

	Tangible fixed assets £'000	Net current assets £'000	Total 2009 £'000
Restricted funds	996	1,119	2,115
Unrestricted funds	17,014	9,208	26,222
Total group funds employed	18,010	10,327	28,337

The restricted income funds derive from the Animal Adoption Scheme and certain donations, grants and legacies received. Animal adoption income is all utilised to purchase animal foods, and the remaining restricted funds are put towards a variety of capital projects, equipment or outreach activities.

The designated funds relate principally to the Society's capital expenditure programme for the coming year, and to outreach programmes which the Society wishes to support over the next three to five years.

19. Financial commitments

	Group		Society	
	2009 £'000	2008 £'000	2009 £'000	2008 £'000
Capital expenditure, contracted for but not provided in the financial statements:	45	286	45	286
Annual commitment in respect of operating leases, for assets other than land and buildings, which expire in one year or less	3	8	1	5

20. Related Party Transactions

The Society has taken advantage of the exemptions available under Financial Reporting Standard Number 8. (Related party transactions) not to disclose details of any transactions with entities that are part of The North of England Zoological Society Group.

The Society has entered into one related party transaction (2008: one). C. Mahon, a Trustee of the Society, is a director of rECOrd Limited (whose mission is the collection and dissemination of all biodiversity information relating to the Cheshire region) which has leased office accommodation within the Zoo grounds at an annual rental of £3,000 (2008: £3,000).

21. Pensions

The Society operates two pension schemes; a defined benefit scheme and a defined contribution scheme. The defined benefit scheme holds assets in a separately administered fund which is closed to new members, and provides retirement benefits on the basis of the members' final salaries.

A full actuarial valuation was carried out as at 31st December 2008 and updated to 31st December 2009 for the purpose of these disclosures by Mercers, a qualified independent actuary. The major assumptions made by the actuary for the defined benefit scheme were:

Weighted average assumptions used to determine benefit obligations at:	2009	2008
Discount rate	5.70%	5.60%
Rate of compensation increase	5.10%	4.50%
Rate of increase of pensions in payment (5% LPI)	3.60%	3.00%
Rate of increase of pensions in payment (2.5% LPI)	2.50%	2.25%
Rate of increase of pensions in deferment	3.60%	3.00%
Inflation	3.60%	3.00%
Weighted average assumptions used to determine net pension cost:	2009	2008
Discount rate	5.60%	5.50%
Expected long term return of plan assets	5.85%	6.35%
Rate of compensation increase	4.50%	4.90%
Rate of increase of pensions in payment (5% LPI)	3.00%	3.40%
Rate of increase of pensions in payment (2.5% LPI)	2.25%	2.40%
Inflation	3.00%	3.40%

Notes to the Financial Statement for the year ended 31st December 2009 (continued)

Expected return on plan assets

To develop the expected long term rate of return on assets assumption, the Society considered the current level of expected returns on risk free investments (primarily government bonds), the historical level of the risk premium associated with the other asset classes in which the portfolio is invested and the expectation for future returns of each asset class. The expected return for each class was then weighted based on the target asset allocation to develop the expected long-term rate of return on assets assumptions for the portfolio. This resulted in the selection of the 5.85% assumption for the year ending 31st December 2009. The corresponding expected return on assets for the year ending 31st December 2010 is 6.32%.

Weighted average life expectancy for mortality tables used to determine benefit obligations at:	2009 Male	2009 Female	2008 Male	2008 Female
Member age 65 (current life expectancy)	22.4	25.6	22.0	24.8
Member age 45 (life expectancy at age 65)	24.3	27.6	23.1	25.9

The mortality assumptions have been amended to recognise that the pensioners have longer life expectancy.

The assets in the scheme and the expected rates of return were:

	Long term expected rate of return at 31st December 2009	Bid value at 31st December 2009	Long term expected rate of return at 31st December 2008	Bid value at 31st December 2008
	%	£'000	%	£'000
Equities	6.95	8,748	6.35	6,918
Bonds/Gilts	5.55/4.45	3,534	6.40/3.85	2,898
Cash	0.50	32	2.00	7
Total market value of assets		12,314		9,823
Present value of scheme liabilities		(12,878)		(11,681)
Net pension deficit		(564)		(1,858)

	2009 £'000	2008 £'000
Change in benefit obligation		
Benefit obligation at beginning of year	11,681	12,246
Current service cost	407	463
Interest cost	660	682
Members' contributions	164	177
Actuarial losses/(gains)	238	(1,564)
Benefit paid	(272)	(323)
Benefit obligation at end of year	12,878	11,681

	2009 £'000	2008 £'000
Change in plan assets		
Fair value of plan assets at beginning of year	9,823	11,564
Expected return of plan assets	580	742
Actuarial gains / (losses)	1,405	(2,869)
Employer contributions	614	532
Members contributions	164	177
Benefits paid	(272)	(323)
Fair value of plan assets at end of year	12,314	9,823

	2009 £'000	2008 £'000
Analysis of pension costs		
Current service cost	407	463
Interest cost	660	682
Expected return on plan assets	(580)	(742)
Total operating costs	487	403
Actual (gains)/losses immediately recognised in the SOFA	(1,167)	1,305
Total pension (credit)/charge recognised in the SOFA	(680)	1,708
Cumulative amount of actuarial losses immediately recognised	2,376	3,543
	2009 £'000	
Actual return on plan assets	1,985	

Five year history

	Financial year ending in:				
	2009 £'000	2008 £'000	2007 £'000	2006 £'000	2005 £'000
Benefit obligation at end of year	12,878	11,681	12,246	10,864	10,038
Fair value of plan assets at end of year	12,314	9,823	11,564	10,452	9,123
Deficit	(564)	(1,858)	(682)	(412)	(915)
	2009 £'000	2008 £'000	2007 £'000	2006 £'000	2005 £'000
Experience adjustments on scheme assets					
Amount (£000s)	1,405	(2,860)	363	300	611
Percentage of scheme assets	11.4%	29.1%	3.1%	2.9%	6.7%
Experience adjustments on scheme liabilities					
Amount (£000s)	770	–	(310)	682	39
Percentage of scheme liabilities	6.0%	0.0%	2.5%	6.3%	0.4%
Total amount recognised in statement of total recognised gain and losses					
Amount (£000s)	1,167	(1,305)	(321)	458	(258)
Percentage of scheme liabilities	9.1%	11.2%	2.6%	4.2%	2.6%

Contributions

The actuary recommended that the Society should make additional payments of £105,000 per annum until 31st December 2009 and then £60,000 for a four year period starting 1st January 2010. In addition, the Society agreed to make a one-off payment of £1.8 million by the end of January 2010 to address the deficit disclosed in the formal actuarial valuation as at 31st December 2008. The Society accepted this recommendation and the contribution figures shown for 2009 include these additional payments alongside the regular contributions to meet the cost of benefit accrual.

Defined contribution scheme

Contributions to the defined contribution pension scheme totalled £30,000 (2008: £21,000).

Supporting Strategic Objectives:

3 4 5 6

Looking Ahead to 2010

An Even Better and More Internationally Engaged Zoo



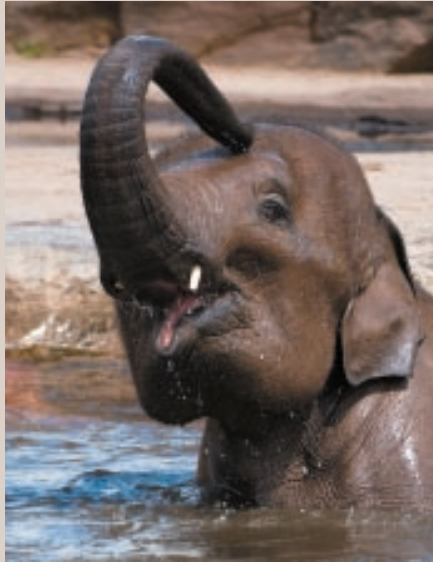
The United Nations has declared 2010 to be the International Year of Biodiversity. It is a celebration of life on earth and of the value of biodiversity for our lives. The world is invited to take action in 2010 to safeguard the variety of life on earth: biodiversity. Chester Zoo is a member of the World Conservation Union (IUCN - the International Union for the Conservation of Nature) and the World Association of Zoos and Aquariums. Both of these organisations are active in supporting the International Year of Biodiversity and both have contributed to a (Chester Zoo funded)

book for 2010 - *Building a Future for Wildlife: Zoos and Aquariums Committed to Biodiversity Conservation*. Published by WAZA, Gland Switzerland.



New Arrivals at Chester Zoo

2010 will be the Year of Giants at Chester Zoo with the arrival of two magnificent new species. Giant Otters and Giant Anteaters and we will be receiving them in our 50 hectare Zoo for the first time. Giant Otters, which are threatened in the wild, can be up to 1.8 metres long whereas Giant Anteaters can measure an impressive 2m in length! We intend to establish conservation breeding programmes for both species.



Baby Elephants in the Making!

As part of our ongoing conservation breeding programme for Asiatic elephants, two of our cows (28 year old Thi and 13 year old Sithami) are expecting calves and are due to give birth in late summer 2010.

Climate Change

On the 18th March 2010, Chester Zoo held its first ever 'Climate Change event: Climate change impacts on biodiversity and the natural world: a presentation and debate on the future of our planet'. This very well-attended event was hosted by the Zoo as part of its remit to raise public awareness of the challenges faced in connection with climate change; and to identify what each of us can do at a local and regional level to help. The event was jointly hosted by the Chester Zoo's Director General, Prof Gordon McGregor Reid and Bristol Zoo Director, Dr Jo Gipps OBE. Paul Pearce-Kelly, of

London Zoo and Chair of the WAZA/CBSG Climate Change Task Force Steering Committee gave a presentation on 'The Climate Change Crisis'. This was followed by a panel discussion, with experts from different parts of the local and regional community which is addressing climate change issues. A lively question and answer session followed. Other Panel Members were Dan Griffiths, Head of Climate Change at the North West Development Agency, Councillor Neil Ritchie, Environment Portfolio Holder (and Deputy Chairman of Cheshire West and Chester Council) who advises individuals and communities on how to reduce their carbon footprint. The event was generously sponsored by Hill Dickinson Solicitors. The Zoo 'carbon compensated' for the event through the Foundation Climate Change Mitigation Fund. This Fund which will be investing on Chester Zoo's behalf in the environmental sustainability element of a local community project.

Natural Vision

The outcome of our planning application is expected summer 2010 and, if successful, then further refinement of the masterplan, business plan and fundraising plan is anticipated during the year.

Above: Asiatic Elephant.

Left: Giant Otter.

Below right: Chester Zoo's Climate Change event.



Appendices on CD

- 1 Chester Zoo Annual Report
- 2 Chester Zoo Organisational Structure
- 3 Chester Zoo Staff on External Boards
- 4 Brief Biographies of the NEZS Executive Team
- 5 Discovery and Learning: Members' Talks
- 6 Zoo Research and Scientific Publications
- 7 Worldwide Conservation Activities
- 8 1935 Annual Report

Species holdings, roles and IUCN Red List Status:

- 9 Mammals
- 10 Birds
- 11 Reptiles
- 12 Amphibians
- 13 Fishes
- 14 Invertebrates
- 15 Plants
- 16 Summary of ALL Roles by Percentage
- 17 Summary of Conservation Status of Collection





Giant Panda Protection

In April 2009, an adult Giant Panda (centre) was seen crossing the river and wandering up into the forest habitat of the Heizhugou Nature Reserve. Habitat on both sides of the valley is now fully protected thanks to the work of Chester Zoo's China Conservation Programme, in partnership with the Sichuan Forest Department, Liverpool John Moores University and local Chinese communities. This photograph was taken by Reserve Manager, Mr. Yin Li-zong, using a camera purchased with Chester Zoo funds.

www.chesterzoo.org

Registered Charity Number 306077
Registered Company Number 287902

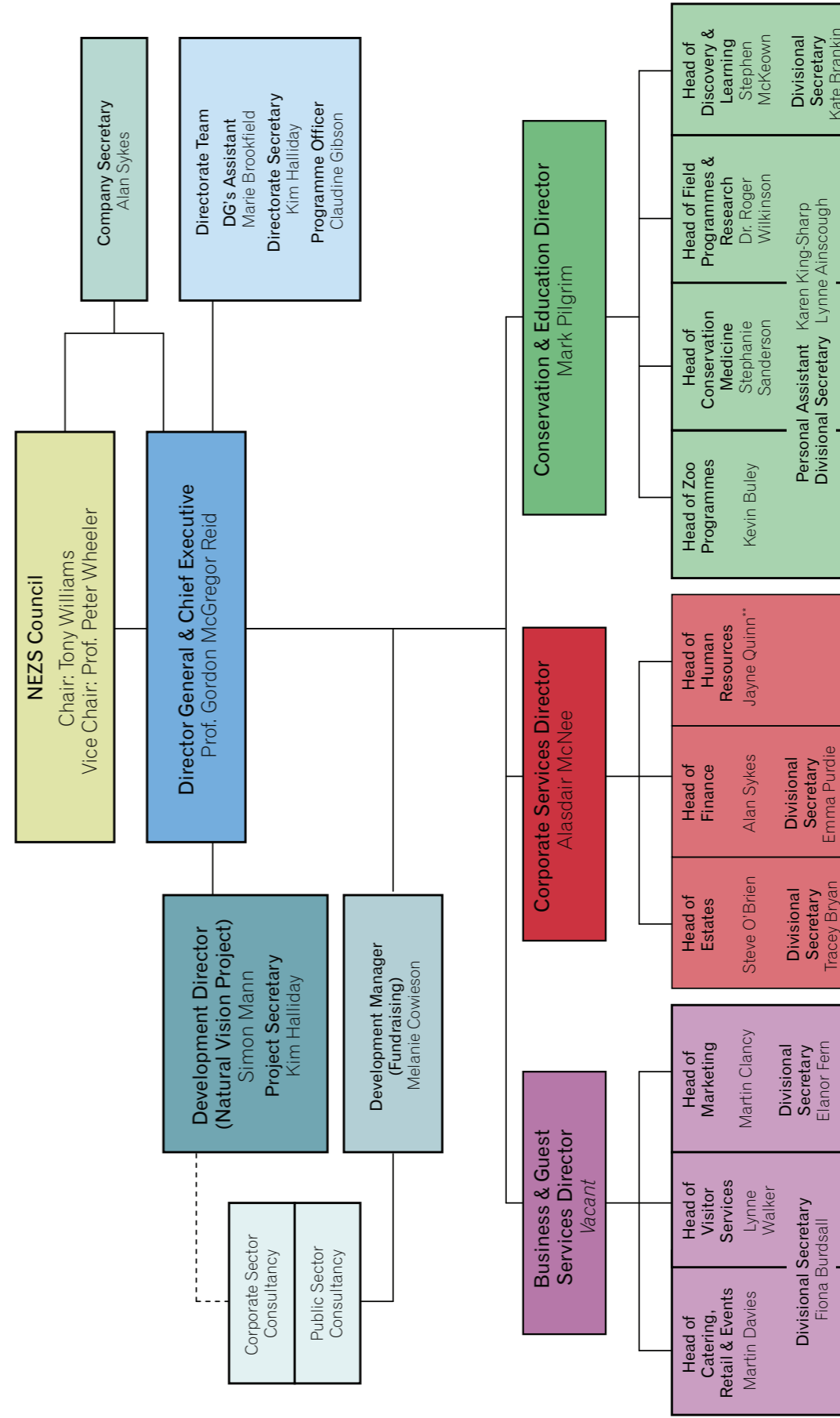
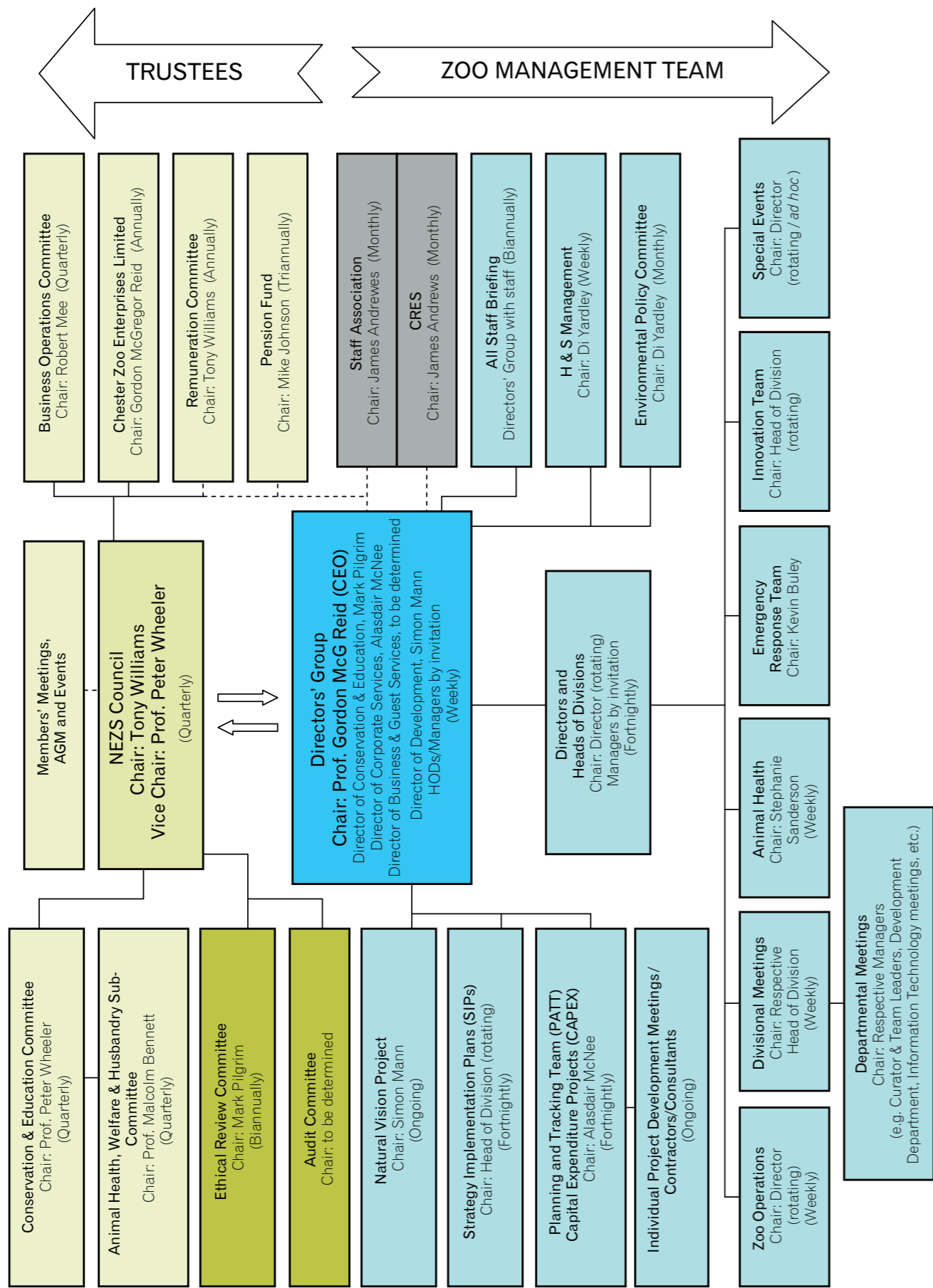
North of England Zoological Society
Caughall Road
Upton by Chester
Chester CH2 1LH
Tel: 01244 380280
Fax: 01244 371273
Email: info@chesterzoo.co.uk

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Published May 2010 by the North of England Zoological Society.

Celebrating 75 Years of Conservation

NEZS / Chester Zoo Trustee and Executive Meeting Structure 2009

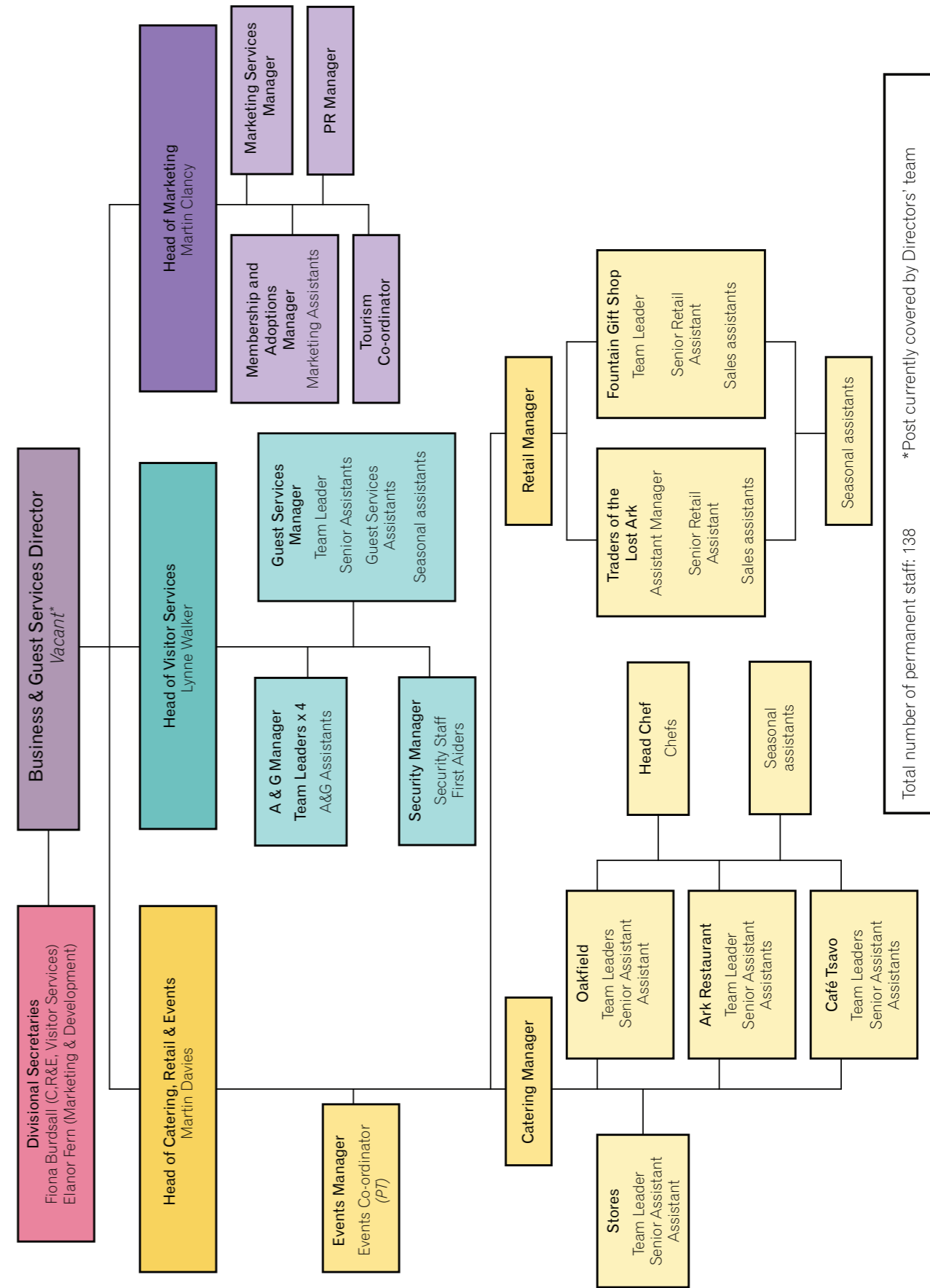
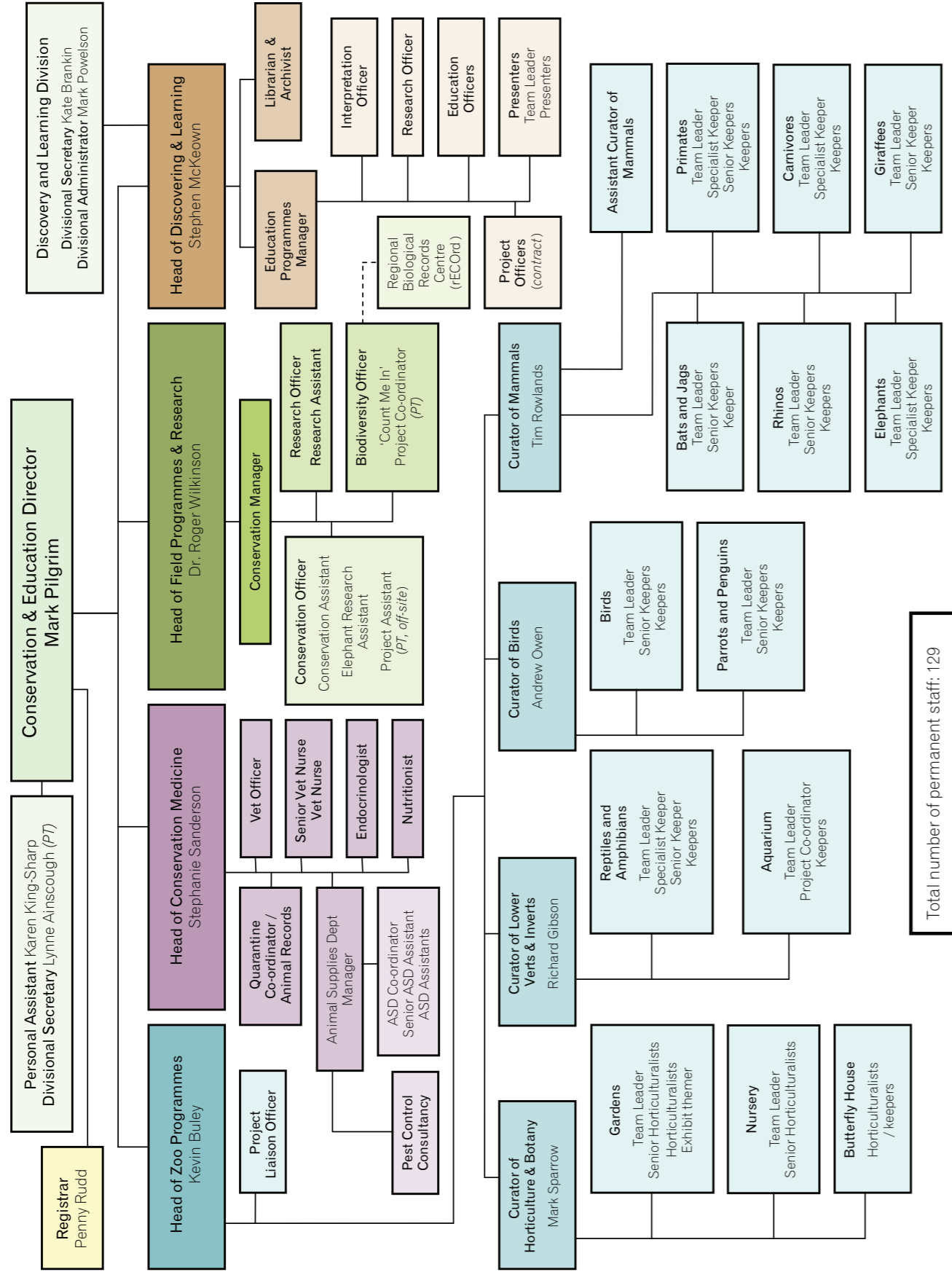
NEZS / Chester Zoo Organisational and Management Structure 2009



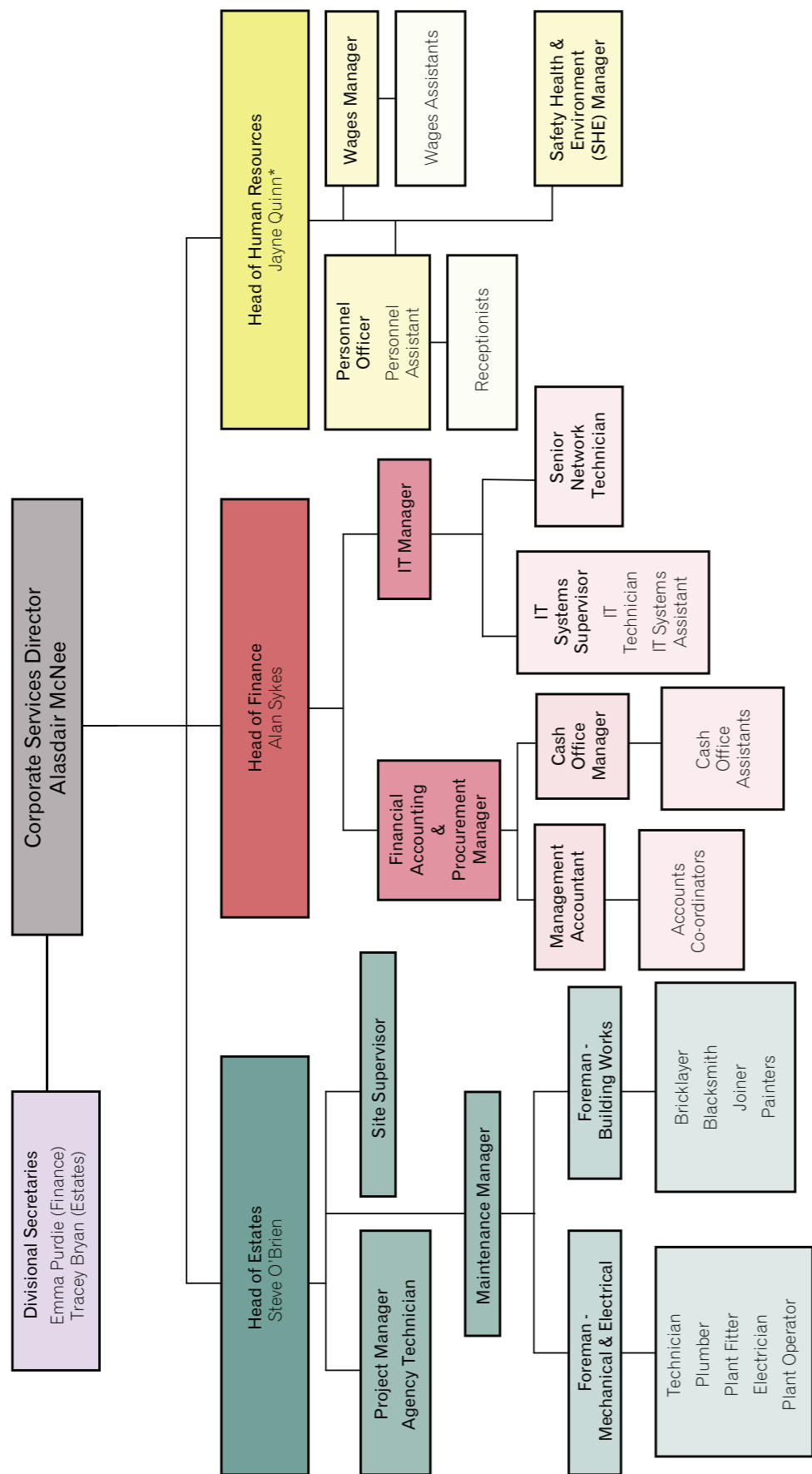
Total number of permanent staff: 322* **Total number of seasonal staff (high season): 214** **Total number of staff (high season): 539**
Seasonal staff: 34 **Total number of seasonal staff (low season): 18** **Total number of staff (low season): 342**
 **Left the society 23rd October 2009, replaced by David Littler

Conservation & Education Directorate 2009

Business & Guest Services Directorate 2009



Corporate Services Directorate 2009



* Left the Society 23rd October 2009, replaced by David Littler

Total number of permanent staff: 50

Staff on External Boards

Professor Gordon McGregor Reid Director General

President and Member of Council, World Association of Zoos & Aquariums (WAZA). Became Immediate Past President, October 2009

Past President, Linnean Society of London

President, rECOrd, the Biodiversity Information System for Cheshire, Halton, Warrington and Wirral

Visiting Professor, Department of Veterinary Clinical Science and Animal Husbandry, University of Liverpool; and Member of Faculty Board for Veterinary Science

Global Chair of IUCN Species Survival Commission / Wetlands International Freshwater Fish Specialist Group

Global Co-Chair Amphibian ARK Project (WAZA in partnership with IUCN SSC Amphibian Specialist Group and Conservation Breeding Specialist Group)

Champion, WAZA/IUCN-CBSG Climate Change Task Force

Member, Strategy Advisory Committee of the IUCN SSC Conservation Breeding Specialist Group

Chair / Trustee, Frozen Ark Project (cryobiological partnership between Chester Zoo, British Museum of Natural History, Institute of Zoology and University of Nottingham)

Scientific Advisor, PAZAAB Scientific Committee

Advisor, AArk Advisory Committee for Biobanking Amphibians

Member, IUCN World Conservation Union

Member, Editorial Advisory Board, International Zoo Yearbook

Member, Editorial Advisory Board, Canadian Journal of Pure and Applied Sciences

Member of Council, Association of Leading Visitor Attractions, UK

Business Ambassador (Tourism) Cheshire and Warrington Economic Alliance

Richard Barnett Management Accountant

Treasurer, Association of British and Irish Wild Animal Keepers (ABWAK)

Steering Group Member, International Congress of Zookeepers (ICZ)

Sarah Bird Biodiversity Officer

Trustee, rECOrd - the Biodiversity Information System for Cheshire, Halton, Warrington and Wirral

Chair, Cheshire Mammal Group

Vice-Chair, BIAZA Native Species Working Group

Conservation Committee Member, Cheshire Wildlife Trust

Steering Group Member, Cheshire regional Biodiversity Partnership (CrBP)

Member, North East Wales Joint Biodiversity Partnership

Member, Cheshire Invasive Non-Native Species Initiative

Member, North Wales Invasive Non-Native Species Forum

Member, Cheshire Recorder's Forum

Member, Cheshire Black Poplar Biodiversity Action Plan Group

Member, Sustainable Cheshire Forum

Member, Botanic Gardens Education Network (BGEN)

Kate Brankin Learning & Discovery Divisional Secretary

Regional Co-ordinator for Advanced National Certificate in the Management of Zoo Animals

David Brunger Records Officer

Co-Chair, BIAZA Records Group

Kevin Buley Head of Zoo Programmes

Executive Board of IUCN Turtle Survival Alliance

Executive Board Turtle Conservation Fund

Vice-Chair, IUCN Turtle Survival Alliance – Europe

Member, IUCN Tortoise & Freshwater Turtle Specialist Group

Vice-Chair, BIAZA Conservation & Animal Management Committee

Chair, BIAZA Joint Working Groups Committee

Maggie Esson Discovery & Learning Programme Manager

Member, Visitor Studies Group Committee

Dr Andrea Fidgett, Nutritionist

Chair, EAZA Nutrition Group

Member, EAZA Research Committee

Member, AZA Nutrition Advisory Group

Reporting Member, BIAZA Research Group

Visiting Lecturer and Member Board of Studies, BSc Conservation Medicine, Liverpool University

Treasurer, Flora & Fauna International (North West Group)

Richard Gibson, Curator Lower Vertebrates and Invertebrates

Taxon Officer, IUCN SSC CBSG & WAZA Amphibian Ark

Chair, EAZA Amphibian TAG

Member, IUCN Reintroduction Specialist Group

Member, IUCN Conservation Breeding Specialist Group

Member, IUCN SSC Iguana Specialist Group

Member, EAZA Reptile TAG

Member, BIAZA Reptile and Amphibian Working Group

Member, Editorial Committee - ZSL, International Zoo Year Book

Member, Society for the Study of Amphibians and Reptiles

Member, American Society of Ichthyologists and Herpetologists

Member, British Herpetological Society

Dr Sonya Hill Research Officer

Committee Member, BIAZA Research Group

Co-opted Member of Council, Primate Society of Great Britain

Convenor, Captive Care Working Party, Primate Society of Great Britain

Adviser, Jane Goodall Institute (UK)

Editorial Advisory Board, Anthrozoös: A Multidisciplinary Journal of the Interactions of People and Animals

External Member, Animal Ethics Sub-committee, University of Chester

Guest Lecturer, courses in animal behaviour, conservation and welfare, Anglia Ruskin University, University of Cambridge, University of Liverpool, Liverpool John Moores University, Manchester Metropolitan University

Paul Howse Team Leader

Member of Council, Association of British and Irish Wild Animal Keepers (ABWAK)

Steering Group Member, International Congress of Zookeepers (ICZ)

Lynsey Jones Assistant Development Manager

Member of Council, Association of British and Irish Wild Animal Keepers (ABWAK)

Stephen McKeown Head of Discovery and Learning

President, International Zoo Educators' Association

Co-Chair, WAZA Education Committee

Member, IUCN Commission on Education and Communication

Alasdair McNee Director of Corporate Services

Board Advisor, Chester Renaissance

Governor, West Cheshire College

Andy Moss Education Research Officer

Member, EAZA Working Group for Visitor Studies

Mark Pilgrim Director of Conservation and Education

Member, IUCN World Conservation Union

Member, UK Committee; and Conservation Council, IUCN Conservation Breeding Specialist Group, Species Survival Commission

Member, IUCN Asian Elephant Specialist Group

Member of Council, British & Irish Association of Zoos and Aquariums (BIAZA)

Member, British Association for the Advancement of Science

Member, BIAZA Conservation and Animal Management Committee (CAMC)

Member of Council, European Association of Zoos and Aquariums (EAZA)

Member, EAZA Elephant Taxon Advisory Group

EAZA Accreditation Inspector

Penny Rudd Registrar

Coordinator, Flora and Fauna International (North West Group)

Member, Reaseheath College's Board of Governors, and Animal Care Course Industrial Liaison Group, Chair of Remuneration Committee

Co-ordinator, Cheshire's Biodiversity Action Plan for Harvest Mice

Member of Cheshire Mammal Group

Stephanie Sanderson Head of Conservation Medicine

Chair, Veterinary Advisory Group, BIAZA

Member, BIAZA Conservation and Animal Management Committee (CAMC)

Member, DEFRA Zoo Liaison Group.

Member, DEFRA GB Avian Disease Core Group

Council Member and Honorary Secretary, British Veterinary Zoological Society

Secretary and Trustee, Zebra Foundation for Veterinary Zoological Education

UK Rep, International Committee of American Association of Zoo Veterinarians

Member, Board of Studies, BSc Conservation Medicine, Liverpool University

Honorary Lecturer, Dept Vet Pathology, University of Liverpool

Mark Sparrow Curator Botany & Horticulture

Chair, BIAZA Plant Working Group

Member, Liaison Committee, Association of Zoological Horticulture

Member, EAZA Zoo Horticulture Group Committee

Member, EAZA Zoo Horticulture Group – Plant Conservation Committee

Member, ZooLex Editorial Board

Steve Unwin Veterinary Officer

Member, Pan African Sanctuary Alliance Advisory Board

Honorary Lecturer, Dept Vet Pathology, University of Liverpool

Member, International Committee of American Association of Zoo Veterinarians

Dr Susan L Walker Endocrinologist

Co-Chair, European Group on Zoo Animal Contraception (EGZAC)

Steering Committee Member, AZA Endocrinology Scientific Advisory Group

Honorary Lecturer, University of Liverpool

Natural Environment Research Council Co-operative Award in Sciences of the Environment (NERC CASE) PhD Supervisor

Reporting Member, BIAZA Research Group

Member, Association of British and Irish Wild Animal Keepers (ABWAK)

Dr Roger Wilkinson Head of Field Programmes & Research

Vice-President, West African Ornithological Society

Vice-President, Avicultural Society

Council Member, Mauritius Wildlife Foundation

Trustee, Polillo Island Biodiversity Conservation Foundation

Member, EAZA Conservation Committee

Member, BIAZA Conservation and Sustainability Committee

Chair, EAZA Parrot TAG

Co-Chair, EAZA Hornbill TAG

Member, Galliformes Specialist Group (IUCN/Birdlife/WPA)

Member, IUCN-UK Committee

Consultant to British Ornithologist's Union Records Committee

Chair, Chester and District Ornithological Society

Scientific Adviser, World Parrot Trust

EAZA Accreditation Inspector

Alexandra Zimmermann Conservation Manager

Member, IUCN Cat Specialist Group

Scientific Advisor, Awely des Animaux et des Hommes

DPhil Candidate, Wildlife Conservation Research Unit, Oxford University

Brief Biographies of the NEZS Executive Team

Professor Gordon McGregor Reid BSc, PhD, DSc, CBiol, FIBiol Director General

Gordon joined the Society in 1992 as Curator-in-Chief, becoming CEO in 1995. An academically well-qualified zoologist, Gordon has held senior positions in both the university and museum sector (University of London, British Museum of Natural History, Horniman Museum, London, National Museums, Liverpool). He has since led Chester Zoo to unprecedented success in business and mission, winning numerous institutional and personal awards through excellent team building, financial management, fundraising, marketing, public relations and tourism initiatives. Gordon has held many senior board positions from his wider professional activities, stemming from a diverse international career involving scientific research, conservation, animal welfare, education and public recreation. He was a government appointed Zoo Inspector 1984-2008 and is a former Trustee of the National Museums Liverpool, Immediate Past President of the Linnean Society of London and Immediate Past President of the World Association of Zoos and Aquariums (WAZA).

Mark Pilgrim BSc (Hons) Conservation and Education Director

Mark left school in 1980 and found engineering work in Portsmouth Dockyard. He decided to go back to further his education at the North East London Polytechnic, graduated with a degree in Science in 1986 and joined the Zoo as a bird keeper two years later. Mark went on to become Deputy Curator of Birds and, in 2001, became Chief Curator responsible for the whole animal and plant collection at the Zoo. In 2007 Mark became Director of Conservation and Education with a determination to bring these two key areas of the zoo closer. Mark is a Council Member of the European Association of Zoos and Aquariums (EAZA) and of the British and Irish Association of Zoos and Aquariums (BIAZA) and manages the European zoo populations of Black Rhino, Jaguar and the Ecuadorian Amazon Parrot.

Alasdair McNee BSc, MBA Corporate Services Director

Alasdair has wide ranging experience of the UK's leisure and tourism industry including visitor attractions, international tour operators, airlines as well as hotels and restaurants. He has also spent 8 years as an investment analyst covering the leisure sector of the London stock-market. Recent positions held include Corporate Planning Manager at Greenalls Group plc, Group Marketing Director at De Vere Group plc and Marketing Director at MacDonald Hotels plc. Alasdair joined the Society in July 2007.

Simon Mann BSc Development Director

Simon initially studied as an architect before completing a degree in construction management. After qualifying he worked for a number of regional and national building contractors as a design and build manager on projects across the UK. In 1997 Simon moved to project management consultancy, initially working for a specialist London based practice on a series of high profile projects including the BBC Broadcasting House re-development in Central London. In 2003 he joined the largest UK PM consultancy and as a Director helped to develop the regional business within the North West. Simon first worked for the Society as Interim Development Director for Natural Vision in 2008 before taking up the permanent role in March 2009.

Kevin Buley BSc (Hons) Head of Zoo Programmes

Kevin graduated from the University of Southampton in 1994 and started at the Durrell Wildlife Conservation Trust as a Keeper in the Herpetology Department. He worked at the zoo in Jersey until May 2003, latterly as the Head of the Herpetology Department before joining Chester Zoo as the Curator of Lower Vertebrates and Invertebrates. He was appointed Head of Zoo Programmes with overall responsibility for the Animal and Plant Division in September 2007.

Stephanie Sanderson MA VetMB, MSc(WAH), MRCVS Head of Conservation Medicine

Stephanie qualified with zoology and veterinary degrees in 1994 and after 3 years in general practice, took up a Residency at a large, wildlife rehabilitation centre. In 1998 she undertook an MSc in Wild Animal Health and was appointed Veterinary Resident at the Society on graduation. Over the next 8 years she acquired responsibility for the development of the veterinary, nutrition and endocrinology services and for the animal supplies department. She was appointed Head of Division in 2007.

Dr Roger Wilkinson BSc, PhD Head of Field Programmes and Research

After a first degree in Zoology, Roger gained his PhD and completed a Research Fellowship in Animal Behaviour at Southampton University before enjoying 6 years in Nigeria as Senior Lecturer at Bayero University Kano. Roger joined the Society in 1983 as Curator of Birds, becoming Curator of Higher Vertebrates in 1999 and taking on his current role of developing the Zoo's conservation and research work in 2002.

Stephen McKeown BSc, PGCE Head of Discovery and Learning

Stephen graduated from University in 1984 and, a few months later, joined a zoo in Scotland as Assistant Education Officer. Subsequent to that he worked in a variety of jobs including on television and radio and as a reporter on a Sunday newspaper before completing a teacher training qualification and moving to Botswana to work as a science teacher. On his return he took up post as Senior Education Officer at another Scottish zoo before joining the Society in 1997 as Head of Education.

Lynne Walker Head of Visitor Services

Lynne joined the Society as Head of Visitor Services in March 2009. With an early career in sales and marketing, she then gained a wealth of experience in visitor attraction operations and management working for the Blackpool Pleasure Beach Company for 14 years before moving to join the team who opened the iconic Arena and Convention Centre on Liverpool Waterfront as part of the City's celebration as the 2008 European Capital of Culture.

Martin Clancy BSc Head of Marketing

After graduating in Business Studies at the University of Bradford, Martin has progressed through direct marketing and marketing communications roles within the holiday and leisure sectors. After successfully re-launching an established holiday brand for a FTSE 100 company, he broadened his commercial experience whilst running his own business. He joined the Society in 2008 as Interim Marketing Services Manager and undertook his present position in 2009.

Martin Davies Head of Catering, Retail and Events

After qualifying as a Chef, Martin gained experience with a large UK hotel chain, quickly becoming Head Chef-trainer for its newly built hotels. Gained membership of the World Master Chefs' Society and studied with Henley School of Management before moving to manage hotel catering for the UK's biggest leisure attraction management company, Tussauds. After 2 years experience at Disney, the world's largest entertainment company, Martin joined the Society in 2006 as Catering, Retail and Events Manager.

David Littler BA (Hons), MCIPD Head of Human Resources and Organisation Development

David is an experienced HR professional who has operated in both the private and public sectors. After graduating in Social Sciences, David has gained experience in various human resources generalist and project management capacities. He gained a post graduate Diploma in Personnel Management and is a Chartered Member of the Institute of Personnel and Development. Before joining the Zoo David held positions at senior level in manufacturing and in the NHS. He also gained experience as an independent HR consultant providing support to clients covering a wide range of issues on matters relating to people and organisational development.

Stephen O'Brien BSc (Hons), Dip Surv Head of Estates

After studying Building and Civil Engineering, Steve gained considerable experience in large organisations as a senior engineer in the Docks and Harbour Industry and later design and project management in the Nuclear Industry. He joined the Society in 1988 as Estate Engineer, one of the original Head of Divisions responsible for all capital development and estate management. During this period he has reinforced his academic career with further qualifications in Building Surveying and Estate Management.

Alan Sykes FCA, DipBA. Head of Finance and Company Secretary

After qualifying as a Chartered Accountant, Alan gained post qualification experience with one of the 'big 4' accounting firms before studying Business Administration at Manchester Business School. Subsequently he gained considerable financial managerial and secretarial experience in a wide variety of companies. He joined the Society in 1991, initially as Deputy Head of Finance, and was promoted to his present position in 2000.

Members' Talks

14th January 'What not to eat – the science of zoo nutrition'
Dr Andrea Fidgett

On the plains of Africa and in the Amazon rainforests, the inhabitants live off what's growing and living around them. But in a totally different environment, where living off the land isn't an option, what do zoo animals need to eat to stay healthy? We humans are told that variety is the key to a healthy diet and the same is true for zoos' residents. As the saying goes, 'you are what you eat'. Diet plays a vital role in maintaining health and fending off disease and is not simply a source of calories. Our knowledge of the nutritional needs of zoo animals is miniscule but we must provide nutritional support for all stages of life. So just what exactly is a 'square meal' if you are a Komodo dragon? And do hyacinth macaws have to follow the five-a-day rule? This presentation will explore what is involved in menu-planning for the 450+ species at the Zoo.

Andrea Fidgett: *Based at Chester Zoo since 2002, Andrea remains the only full-time nutritionist employed by a UK zoo and has lectured at universities and zoos in the UK, Europe, South Africa, India and China. Following her Zoology degree Andrea spent three years as a research assistant at Jersey Zoo. Investigating diet and mortality in endangered parrots there led to her 'niche' as a comparative wildlife nutritionist, via an MSc in nutrition and a PhD in avian ecology. Between further degrees she also helped designed 'ZOOTRITION', diet management software for zoos.*

10th February The Snail Trail – The Search for Partula in Polynesia
Karen Entwistle

Partula snails have been kept at Chester since 1989, as part of a breeding programme to help save them from extinction. The programme now involves 15 zoos worldwide which currently maintain 22 species, most of which are extinct in their natural habitat, due to the release of the predatory rosy wolf snail. A handful of Partula species can still be found in small populations in particular valleys on Tahiti and Moorea. The field studies are an essential part of the success of the breeding programme, the numbers of Partula in the wild are closely monitored as are the numbers of the rosy wolf snail that still threaten the Partulas existence in the wild. Another important part of the in-situ work is the planning and preparation of small reserves where Partula can be released into a protected habitat.

Karen Entwistle: *Karen has worked in the Herpetology Department for 7 years. Before joining the Zoo she studied at university and volunteered at Bolton Museum Aquarium. 5 years ago Karen was given the opportunity to take over the care of the Partula Snails after assisting in their maintenance for two years. In August 2008 she spent two weeks assisting Dr Trevor Coote in his field studies.*

18th March Wildlife Crime Unit in Medan
Andy Wolfenden

Illegal trafficking of wildlife is one of the primary threats facing animals and plants worldwide. In Medan, the fourth largest city in Indonesia, a crack team is devoted to tracking down those who threaten the survival of some of that country's most endangered species. Andy joined the Medan Wildlife Crime Unit to see for himself what working on the real and sometimes disturbing frontline of conservation really means.

Andy Wolfenden worked at the Blue Planet Aquarium for two years before joining Chester Zoo's Aquarium four years ago. With a big interest in developing natural methods of environmental enrichment for big cats, he joined the Carnivore keeping team three years ago. His 'Paramount of playtime: big cat enrichment at Chester Zoo' talk proved to be one of our most popular Members' Talks in 2008.

7th April The Assam Haathi Project
Scott Wilson

Asian elephants are having to exist in an increasingly human dominated landscape. In Assam, human elephant conflict leads each year to loss of crops, damage to buildings and injury and death to rural villagers and elephants alike. The Assam Haathi Project is working closely with affected communities to reduce this conflict, help improve livelihoods and promote the conservation of elephants.

Scott Wilson: *Scott joined the Chester Zoo Conservation Division in 2002. As Conservation Officer he has a very diverse role including helping to develop and manage Chester's growing portfolio of conservation outreach activities worldwide and managing the GIS components of Chester's conservation programmes.*

Scott originally studied Marine Biology & Zoology at Bangor University, and went on to complete an MSc in Conservation Biology at Manchester Metropolitan University. Between studying Scott's previous jobs have included working for the Zoology Department of the Ulster Museum, Belfast; as a Team Leader for the Sea Turtle Protection Society in Greece; and as a teacher in Zimbabwe for VSO.

13th May Andean Bear Conservation in Venezuela: a team-work approach
Shaenandhoa Garcia-Rangel

The Andean bear is the only remnant species of the Tremactinae subfamily, and the only ursid across South America. Its distribution extends from Venezuela to Bolivia, across deciduous and evergreen forests, moors, páramos and puna prairies. In Venezuela, the species is "Endangered" and is constantly threatened by poaching and habitat destruction. In the 1980s, conservation efforts were initiated and by 1994, 12 National Parks had been declared across the species range. Interest and commitment declined considerably during the following years, until the beginning of the XXI century, when a second wave of concern in the Andean bear brought together a small group of scientists, vets, NGOs and students. The first task of this team was to update the existing Action Plan to re-assess the species conservation status and priorities. In 2007, the new Action Plan was published and put into practice as it was integrated with on-going efforts, such as the Andean bear – Sierra de Portuguesa project, partially funded by Chester Zoo.

Shaenandhoa (Shena) will bring us up to the date with the work of the project, its success and its future direction.

Shaenandhoa García Rangel is a biologist from the Universidad Simón Bolívar in Venezuela. She is a PhD candidate at the Wildlife Research Group, with a project focused on generating a habitat and landscape-use model for the Andean bear in Sierra de Portuguesa, North-East end of the Venezuelan Andes. Her research interests are focused on carnivores, neotropical and landscape ecology, conservation and management, and the Andean ecosystem. She has been involved in Andean bear conservation since 2002, promoting the update of the species Action Plan for Venezuela, the consolidation of the Andean bear Venezuelan Team, and actively participating as a member of the Bear Specialist Group and the International Association for Bear research and Management.

4th June What Darwin didn't know
Richard Fortey

Charles Darwin was puzzled by the lack of fossils providing 'missing links' between major animal groups. Richard will show just how many of these 'links' have now been found - from feathered dinosaurs to early humans. Since Darwin's death, our knowledge of the history of life has been transformed by many new discoveries. Richard will describe how life can be understood as a series of evolutionary breakthroughs. But some ecologies - like those of coral reefs - seem to emerge spontaneously many times over hundreds of millions of years.

Richard Fortey was a senior palaeontologist at the Natural History Museum until his retirement in 2006. He is the author of several books, including *Fossils, A Key to the Past* and *The Hidden Landscape* which won *The Natural World Book of the Year* in 1993; *Life: An Unauthorised Biography, Trilobite!*, which was short-listed for the Samuel Johnson Prize; and *The Earth: An Intimate History*. He has won the Lewis Thomas and Michael Faraday medals for his science writing. He was President of the Geological Society of London during its bicentennial year in 2007, and is a Fellow of the Royal Society. His most recent book, a look behind the scenes at the Natural History Museum, was published this year by HarperCollins and is called *Dry Storeroom No. 1*. He lives in Oxfordshire.

10th September Cheetahs for Chester: The De Wildt Ambassador Project Nicky Bolton

The cheetah is on the endangered list. This international project, run by the De Wildt Cheetah and Wildlife Trust, is designed to raise local and ultimately global awareness of the cheetah's plight, contributing to safeguarding its environment in the future. De Wildt works with scientists and communities to produce a mix of solutions to the challenge of saving the cheetah. A key aspect of its work is with schools and communities, raising awareness and making conservation possible through educational outreach work. The Ambassador scheme is an essential element of their educational work. Nicky Bolton will describe how the project is run in local communities in South Africa, using live Ambassador Cheetahs in the classroom. She will also share some of the new resources that are being developed as a consequence of the educational links between Chester schools, Chester University and the De Wildt Trust.

Ann van Dyck, who founded the De Wildt Trust 30 years ago, still works tirelessly for wild life. She is extremely enthusiastic about the Chester link:

"... responsibility for supporting the cheetah in its race for survival must pass from old people like me to the next generation of children and young people – not just in South Africa but across the world."

Nicky Bolton is a teacher at Overleigh St. Mary's Primary School, Chester. She is an ardent conservationist and has recently had the privilege of working as part of a teaching exchange with the De Wildt Cheetah and Wildlife Trust near Pretoria, South Africa.

11th November Mauritius Evening • Professor Gordon McGregor Reid • Richard Hewitt • Maggie Esson

Dodos, giant tortoises, hibiscus, echo parakeets and fruit bats: conserving and interpreting the wonderful ecology of Mauritius and the other Mascarene islands.

Gordon McGregor Reid

Saving the wildlife of the Mascarenes is a race against time. For some fifteen years Chester Zoo has worked closely with the Mauritius Wildlife Foundation (MWF) on several projects to rescue critically endangered endemic plants and animals and, more recently, to engage in the complete ecological restoration of habitats. In May 2009, Gordon visited Mauritius as a guest of the MWF to view these projects and to sign the Memorandum of Understanding (MOU) on our renewed collaborative partnership. Gordon met with members of the dedicated Mauritian conservation team, which includes Chester Zoo staff. He also carried out a number of high profile engagements including trips to field stations, photo calls, media interviews and conservation stakeholder meetings. This presentation will review his trip and celebrate the very substantial progress in developing Chester Zoo's vital collaboration with the MWF and the Mauritian Government.

Professor Gordon McGregor Reid is Chester Zoo's Director General. Gordon joined the Zoo in 1992 as Curator-in-Chief, becoming CEO in 1995. An experienced tropical field biologist, Gordon has held senior positions in both the university and museum sector (University of London; University of Sokoto, Nigeria; British Museum of Natural History; Horniman Museum, London; National Museums, Liverpool). He is a Past-President of the Linnean Society of London and is the Immediate Past President of the World Association of Zoos and Aquariums (WAZA).

Plant Propagation Training

Richard Hewitt, Senior Horticulturist

Richard will tell us about the plant propagation training he gave to MWF staff on Rodrigues and Mauritius. The technique of air layering which he demonstrated is a type of propagation used where plant numbers are small. He will also look at propagation facilities and critically endangered plants on Rodrigues and Mauritius.

Richard Hewitt is a Senior Horticulturist, working in Chester Zoo's Horticulture and Botany Department. Based in the nursery, Richard has worked at Chester Zoo for 7 years and is responsible for the propagation and growing on of hardy plants including British native plants Juniper and Black Poplar.

A dream come true!

Maggie Esson, Education Programmes Manager

Being given a coral island to develop for education is probably every educator's dream. Ile aux Aigrettes is such an island; a 29ha Nature Reserve 800m off the coast of Mauritius and leased by the government to the Mauritian Wildlife Foundation. Ile aux Aigrettes is an important vehicle to showcase the conservation work of the Mauritian Wildlife Foundation and Chester Zoo and both NGOs work in partnership across a range of conservation initiatives, now including schools' education.

The boat trip may be short but in terms of time travel the journey winds back the calendar 400 years and this vision of a once-pristine Mauritius is what we hoped to convey to local school groups visiting the island. The 'Learning with Nature' project and the resourcing and training required to deliver the project was conducted as a partnership between the Education Division at Chester Zoo and MWF.

Maggie Esson has been involved with this process since the beginning acting as education advisor and in May this year the official launch of 'Leaning with Nature' took place. This launch was the culmination of three years of planning starting with a stakeholder consultation conducted by Maggie, followed by a MWF senior staff workshop jointly-facilitated by Maggie and Prof. Carl Jones. This resulted in an agreed and time bound development plan for the island. The island looked at its best for the launch and MWF and Chester Zoo staff put in a huge effort to achieve this.

28th November History of Chester Zoo Stephen McKeown, Head of Discovery and Learning

Throughout the year we've been celebrating the 75th anniversary of the founding of the North of England Zoological Society and in doing so have uncovered photographs and film footage going back to the earliest days of our existence that have not seen the light of day for decades.

This afternoon takes us on a multimedia journey through eight decades of the Zoo's history with an emphasis on those early years when George Mottershead and his family overcame so many obstacles to establish the organisation that Forbes magazine lists as one of the world's top fifteen zoos.

Stephen McKeown is Chester Zoo's Head of Discovery and Learning and the current President of IZE (International Zoo Educators).

Papers presented at conferences by Discovery and Learning Staff

Hard Rain: Can zoos risk delivering bad news? – Andy Moss
European Zoo Educators' Conference, Cologne, Germany

Rhinos – The Ultimate Teaching Tool - Maggie Esson
Rhino Mayday, ZSL, London

Achieving Audience Inclusivity - Maggie Esson
Visitor Studies Group Summer School, Leicester University

Hard Rain Exhibition: Reflection and Evaluation - Maggie Esson and Andy Moss
Interactive whiteboard evaluation in the Joseph Banks Room - Ruth Pearson
Heart of Africa: Visitor concept testing - Maggie Esson
The 10 things we now know about our visitors... - Andy Moss
Education Research Symposium, Chester Zoo

Social Inclusion and the Action Agenda: Can zoos achieve both? - Maggie Esson
ACE Conference, Knowsley Hall

In addition, many other members of Zoo staff gave talks at national and international conferences.

Zoo Research and Scientific Publications page 1

The Society publishes International Zoo News, with numerous articles contributed each year. The total number of publications and technical reports produced by staff, students and associates of the Zoo, published in 2009, exceeds ninety. A selection is listed here:

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Worldwide Conservation Activities page 1

Title	Focus country
NEZS Project Support: <i>In situ</i> conservation tools for South Asia	Asia
NEZS Project Support: Human-Tiger conflict	Asia
NEZS staff participation in a meeting on challenges and opportunities in conserving the indigenous freshwater fishes of Australia	Australia
NEZS Project Support: Alternative-materials headdress creation as a tool for the conservation of the Blue-throated Macaw	Bolivia
NEZS Project Support: Establishing the genetic architecture of the northern Botswana giraffe populations and the evolutionary relationships of these populations to other African populations	Botswana
NEZS Project Support: Makgadikgadi Brown Hyena project	Botswana
NEZS Project Support: Lowland Tapir Conservation Initiative: Expanding from the Atlantic Forest to the Pantanal	Brazil
NEZS Project Support: Yellow Breasted Capuchin conservation project	Brazil
NEZS staff facilitated Amphibian Ark conservation needs assessment workshop	Brazil
NEZS Project Support: Conservation of the Grey-breasted Parakeet	Brazil
NEZS Jaguar Programme: Production of a special issue of Cat News – Jaguar National Action Plan	Brazil
NEZS Project Support: Conservation ecology of the Bengal Florican	Cambodia
NEZS Project Support: Assessment of an unprotected forest corridor for the dispersal of isolated Cross River Gorilla and Gulf of Guinea chimpanzee populations in Southwest Cameroon	Cameroon
NEZS staff activities - Staff visit to Toronto Zoo to provide technical laboratory support	Canada
NEZS Project Support: Geographical variation in socio-ecology of Spider Monkeys in Meso-America	Central America
NEZS staff participation as guest lecturer on captive care and conservation of callitrichids and lemurs	Channel Islands
NEZS Project Support: Status survey, reproduction biology, population ecology, and diseases in <i>Rhinoderma darwini</i>	Chile
NEZS staff facilitated Amphibian Ark conservation needs assessment workshop in Santiago	Chile
NEZS staff visited and consulted on Darwin's frog <i>ex situ</i> projects in Santiago and <i>ex situ</i> and <i>in situ</i> projects in Concepcion	Chile
NEZS China Programme: Wildlife conservation strategy for the Liangshan Region	China
NEZS Project Support: Sturgeon Red List assessment	China
NEZS China Programme: Sichuan Forest Biodiversity Project	China
NEZS China Programme: Blue-crowned Laughingthrush support	China
NEZS China Programme: Community conservation education for Hei Zhu Gou Nature Reserve, Liangshan Mountains, Sichuan Province	China
NEZS China Programme: Improving biodiversity conservation and management in the Gaoligongshan Mountain Range	China
NEZS Project Support: Community outreach programme around the Lesio-Louna Natural Reserve of Gorillas	Congo
NEZS Project Support and staff activities: Ecology and conservation of the Costa Rican Green-eyed Frog	Costa Rica
NEZS Project Support: Okapi EEP supporting the Okapi Wildlife Reserve	Democratic Republic of Congo
NEZS staff participation at the EAZA Annual Conference	Denmark
NEZS Director General signed WAZA's petition on climate change to be included in the COP15 UN Climate Change Conference, Copenhagen	Denmark
NEZS Project Support: Mountain Chicken conservation programme	Dominica
NEZS Project Support: Is Ruspoli's Turaco threatened by hybridization with White-cheeked Turaco?	Ethiopia

Title	Focus country
NEZS Project Support: EAZA European Carnivore Campaign	Europe
NEZS Project Support: Conservation genetics of the Asian box turtles, <i>Cuora trifasciata</i> , <i>C.aurocapitata</i> , <i>C. pani</i> and <i>C. zhoui</i> using microsatellite markers.	Germany
NEZS staff fieldwork to Hagenbeck Elephant School	Germany
NEZS staff participation at EAZA Zoo Educators Conference, Cologne	Germany
NEZS staff activities - Participation at the 7th International Conference on behaviour, physiology and genetics of wildlife	Germany
NEZS Director General participated at international workshop on the restoration of fish populations	Germany
NEZS Project Support: Production of communication materials and web page for the Freshwater Fish Specialist Group	Global
NEZS Jaguar Programme: Human-Jaguar co-existence in the ranches and villages of La Selva Maya	Guatemala
NEZS staff attendance at Asian Zoo Educators conference	Hong Kong
NEZS Project Support: Captive Elephant Health Care Project	India
NEZS Asian Elephant Conservation Programme: Assam Haathi Project	India
NEZS Richard Hughes Scholarship: Learning to live with elephants: A novel education programme for local people who live in and around HEC areas in Karnataka, South India	India
NEZS staff field visit to provide technical support for elephant nutrition research, Assam Haathi Project	India
NEZS Project Support: Assisting the State Government in protecting the endangered Markhor	India
NEZS Realm of the Red Ape Programme: Sumatran Rhino conservation and propagation	Indonesia
NEZS Project Support: Komodo Dragon Project - Community awareness, habitat and wildlife protection plan for the Wae Wuul nature reserve, West Flores	Indonesia
NEZS staff organised inaugural Orangutan Conservancy Veterinary Workshop	Indonesia
NEZS Studentship Project: The impacts of twice-logged forest on forest bird diversity and community composition in Danum Valley, Borneo	Indonesia
NEZS Studentship Project: Play behaviour and social interactions of infant, juvenile and sub-adult wild White-bearded Gibbons, in the Sebangau National Park, in the Natural Laboratory Research Area	Indonesia
NEZS Project Support: The ecology of the Maroon Langur in the Sabangau peat swamp catchment, Central Kalimantan	Indonesia
NEZS Project Support: Sun Bears in human-dominated landscapes: Distribution, population trends and conflicts	Indonesia
NEZS staff attendance at Primate Conservation Workshop	Indonesia
NEZS staff fieldwork assisting with chytrid fungus survey work	Italy
NEZS Director General Chaired WAZA/JAZA dolphin welfare and conservation meeting	Japan
NEZS Black Rhino Programme: Site specific Black Rhino workshop presenting results on 'Molecular Tracking: A non-invasive survey of Black Rhino in Chyulu National Park'	Kenya
NEZS Project Support: Outreach to reduce livestock predation by endangered African Wild Dogs – Samburu-Laikipia Wild Dog Project	Kenya
NEZS staff organized 7th Annual PASA Veterinary Workshop	Kenya
NEZS Black Rhino Programme: Staff field visit to provide GIS and database training to the Maasailand Preservation Trust	Kenya
NEZS Project Support: Facilitating management of an African savannah landscape: aerial surveys of wildlife and livestock across the greater Ewaso landscape	Kenya
NEZS Black Rhino Programme: Staff technical support for the Laikipia Wildlife Forum	Kenya
NEZS Black Rhino Programme: Chyulu Hills - Game Scout and Rhino programme	Kenya

Worldwide Conservation Activities page 2

Title	Focus country
NEZS Black Rhino Programme: The Laikipia Wildlife Forum's Environmental Education Programme	Kenya
NEZS Black Rhino Programme: Emergency funds - Maasailand Preservation Trust	Kenya
NEZS Realm of the Red Ape Programme: Hutan Hornbill Conservation Project	Malaysia
NEZS Studentship Project: Proboscis Monkey population viability analysis: Reassessment and management for wild populations threatened by habitat loss in Borneo	Malaysia
NEZS Realm of the Red Ape Programme: Core funding for Kinabatangan Orangutan Conservation Project	Malaysia
NEZS Realm of the Red Ape Programme: Support for the KOCP Honorary Wildlife Wardens	Malaysia
NEZS Mascarenes Programme: Mauritius Wildlife Foundation horticulture staff training at Chester Zoo	Mauritius
NEZS Mascarenes Programme: Propagation and conservation of the ten critically endangered plant species, including NEZS staff project participation	Mauritius
NEZS Mascarenes Programme: Conservation of the Mauritius Echo Parakeet	Mauritius
NEZS Mascarenes Programme: Conservation of the Mauritius Olive White-eye, and the establishment of a population on the managed offshore nature reserve, Ile aux Aigrettes	Mauritius
NEZS Mascarenes Programme: Restoration and reforestation of the Grande Montagne Nature Reserve	Mauritius
NEZS Mascarenes Programme: Survey & monitoring of Rodrigues Fruit Bat population	Mauritius
NEZS Project Support: CASE Studentship to examine the population dynamics and demography of the endangered Pink Pigeon	Mauritius
NEZS Mascarenes Programme: Staff travel to Mauritius for MWF schools programme launch	Mauritius
NEZS Studentship Project: Measurement of blood parameters packed cell volume, plasma proteins, differential white blood cell count and blood calcium as indicators of the health and immunological status of the endangered Mauritius Echo Parakeet	Mauritius
NEZS Mascarenes Programme: Monitoring marine reserves and assessing the status of endemic species in the Rodrigues Lagoon	Mauritius
NEZS Mascarenes Programme: The role of prey availability in habitat use by the Rodrigues Warbler <i>Acrocephalus rodericanus</i>	Mauritius
NEZS staff attendance at the IUCN Global Cactus Red Listing workshop	Mexico
NEZS Project Support: Assessing the conservation status of cacti in their most important hotspot, the Chihuahuan desert	Mexico
NEZS Project Support: Fish Ark Mexico	Mexico
NEZS Project Support: N/a'an ku sê Carnivore Research Project	Namibia
NEZS Project Support: Conflict, communities and conservation: African Wild Dogs in Namibia	Namibia
NEZS Studentship Project: Capture-associated morbidity and mortality in Black and White Rhinoceroses	Namibia
NEZS Project Support: Comparing breeding success of White-rumped Vultures in Nawalparasi Forests and Dang Deukhuri Foothill Forests in Western Nepal	Nepal
NEZS Project Support: Natural food habitat analysis of Red Panda and conservation threats in Langtang National Park	Nepal
NEZS Nigeria Programme: The Nigerian Montane Forest Project	Nigeria
NEZS Project Support: Identification of key habitats for arthropod diversity and conservation in west African Guinean Forest	Nigeria
NEZS Nigeria Programme: Gashaka Primate Project core support	Nigeria
NEZS Director General participated in 16th Annual Asociación Latinoamericana de Parques Zoológicos y Acuarios (ALPZA) Conference	Panama
NEZS Project Support: Humboldt Penguin: Conservation through responsible tourism in Pisco	Peru
NEZS Project Support: <i>In situ</i> conservation of the Philippine Forest Turtle through information education	Philippines

Title	Focus country
NEZS Philippines Programme: Strengthening biodiversity conservation awareness and advocacy strategies in the West Visayas	Philippines
NEZS Philippines Programme: Southern Cebu biodiversity conservation education programme	Philippines
NEZS Philippines Programme: Polillo Islands Biodiversity Protection and Monitoring Project	Philippines
NEZS Philippines Programme: Frugivorous monitor lizards of the Philippines	Philippines
NEZS Philippines Programme: NEZS staff participation in second national training course on freshwater fish identification and IUCN conservation and Red List workshop	Philippines
NEZS Philippines Programme: The Philippine Cockatoo Conservation Programme	Philippines
NEZS Project Support: Developing a molecular phylogeny of Asian hornbills to test biogeographic hypotheses and clarify conservation priorities	Philippines
NEZS Philippines Programme: West Visayan Threatened Endemic Species Conservation Programme	Philippines
NEZS Philippines Programme: <i>In situ</i> protection scheme for the Visayan Writhed-billed Hornbill on Panay	Philippines
NEZS Philippines Programme: Philippine hornbills conservation programme	Philippines
NEZS Project Support: European zoos supporting <i>in situ</i> conservation of the Philippine Crocodile	Philippines
NEZS staff participation at mid-year meeting of the EAZA Research Committee	Poland
NEZS Project Support: Partula field programme consortium	Polynesia
NEZS staff chaired EAZA Amphibian Taxon Advisory Group meeting	Slovenia
NEZS Project Support: Evaluation of foraging ranges of vultures and their exposure to chemical and other residues in scavenged food	South Africa
NEZS Project Support: Research and actions for the community-based management of the Tanoé forest, Côte d'Ivoire: primate conservation and poverty alleviation	Ivory Coast
NEZS Project Support: The Ground Hornbill research and conservation project	South Africa
NEZS staff presented American Zoo Association Aquatic Collection Sustainability Plan at the European Union of Aquatic Curator meeting	Spain
NEZS staff lectured and demonstrated on week-long amphibian conservation and husbandry training course	Sri Lanka
NEZS staff facilitated Amphibian Ark conservation needs assessment workshop	Sri Lanka
NEZS Project Support: Sri Lanka amphibian conservation seed grants	Sri Lanka
NEZS Asian Elephant Programme: Securing human–elephant coexistence in Sumatra	Sumatra
NEZS staff participation as invited lecturer at the annual meeting of Scandinavian Zoo Vet Group	Sweden
NEZS Project Support: WAZA Biodiversity Book	Switzerland
NEZS staff, chair of International Zoo Educators (IZE) and attendance at annual meeting	Switzerland
NEZS Project Support: Promotion of UN Year of Biodiversity activities	Switzerland
NEZS Project Support: Attendance of delegates at International Advisory Group of the Northern Bald Ibis meeting	Syrian Arab Republic
NEZS Black Rhino Programme: Rhino translocations from Dvůr Králové Zoo, Czech Republic, to Mkomazi	Tanzania
NEZS Black Rhino Programme: Staff project support in Mkomazi, Tanzania and Nairobi	Tanzania
NEZS Black Rhino Programme: Reinforcing the perimeter fence at the Mkomazi Rhino Sanctuary	Tanzania
NEZS Project Support: Resolving conflict between humans and threatened carnivores around Ruaha National Park	Tanzania
NEZS Project Support: Hornbill nest adoptions	Thailand

Worldwide Conservation Activities page 3

Title	Focus country
NEZS Project Support: Budo Hornbill Conservation and Education Center, Tapoh	Thailand
NEZS staff activities: Amphibian Ark strategic planning meetings	United Arab Emirates
NEZS Director General attended mid-year IUCN/CBSG steering committee meeting	United Arab Emirates
NEZS Director General attended WAZA mid year council meeting	United Arab Emirates
NEZS Director General attended Amphibian ARK workshop	United Arab Emirates
NEZS Native Species Programme: Dormice Forever	United Kingdom
NEZS Black Rhino Programme: Black Rhino CASE studentship	United Kingdom
NEZS Native Species Programme: Black Poplar project	United Kingdom
NEZS Native Species Programme: Otter training for land managers	United Kingdom
NEZS Native Species Programme: Raising awareness of invasive non-native species within the Cheshire region	United Kingdom
NEZS staff attendance at Student Conference on Conservation Science	United Kingdom
NEZS Native Species Programme: Bats on film	United Kingdom
NEZS Native Species Programme: Positive action for Great Crested Newts in Connah's Quay	United Kingdom
NEZS Project Support: Wildpro Multimedia 'Captive Management: Environmental and Behavioural Enrichment'	United Kingdom
NEZS staff attendance at BIAZA regional meeting, Martin Mere	United Kingdom
NEZS Project Support: Frog nutrition research studentship	United Kingdom
NEZS Studentship Project: What factors of captive management are increasing adrenal activity in female Asian Elephants to a level where reproductive output is affected?	United Kingdom
NEZS Studentship Project: Genetic diversity in captive chimpanzees: the influence of subspecies identity on behaviour and reproduction	United Kingdom
NEZS Studentship Project: The impact of browse and fruit consumption on regurgitation and reingestion in captive Western Lowland Gorillas	United Kingdom
NEZS staff attendance at Visitor Studies Group Meeting	United Kingdom
NEZS staff presentation at the Save the Rhino International Rhino May Day	United Kingdom
NEZS staff activities - Participation at the European Group on Zoo Animal Contraception	United Kingdom
NEZS staff activities - Participation at the Primate Society of Great Britain	United Kingdom
NEZS staff attendance at BIAZA Awards, Communication, Education Conference	United Kingdom
NEZS staff activities presented at the International Congress on Environmental Enrichment	United Kingdom
NEZS staff activities participated in Amphibian Conservation Mini-summit	United Kingdom
NEZS staff attendance at Visitor Studies Group summer school	United Kingdom
NEZS staff attended BIAZA Aquatics Working Group meeting and presented at the National Aquarium Workshop	United Kingdom
NEZS staff participation in Mountain Chicken recovery action planning meeting	United Kingdom
NEZS Native Species Programme: Floating Water Plantain project	United Kingdom
NEZS Director General gave Members' Talk on Mauritius at Chester Zoo	United Kingdom
NEZS Native Species Programme: Mackay's Horsetail project	United Kingdom
NEZS Native Species Programme: Grass-Wrack Pondweed project	United Kingdom

Title	Focus country
NEZS staff attendance at Gashaka Field Day, London	United Kingdom
NEZS staff hosted 2nd meeting of the Northern England Primate Group at Chester Zoo	United Kingdom
NEZS staff participation in 9th International Conference on Environmental Enrichment	United Kingdom
NEZS staff participation in the 11th BIAZA Research Symposium	United Kingdom
NEZS staff participation in the World Land Trust's Red Ape Debate - The Future for the Orangutan	United Kingdom
NEZS staff participation in the Primate Society of Great Britain Winter Meeting	United Kingdom
NEZS Director General attended meeting on the future relationship between the IUCN and the professional zoo and aquarium community, Bristol Zoo	United Kingdom
NEZS Staff activities - Participation in IUCN FFSG meeting at Chester Zoo	United Kingdom
NEZS Director General hosted IUCN SSC/Wetlands International Freshwater Fish Specialist Group Meeting, Chester Zoo	United Kingdom
NEZS Director General gave opening address at Northern England Primate Group Meeting, Chester Zoo	United Kingdom
NEZS Director General attended WAZA strategy meeting, Bristol Zoo	United Kingdom
NEZS Native Species Programme: Ponds for Pillwort	United Kingdom
NEZS Staff attended the Primate Society of Great Britain Captive Care Working Party meeting	United Kingdom
NEZS Staff attended the Primate Symposium	United Kingdom
NEZS staff attendance at Mammal Society Symposium on Human-Wildlife Conflict	United Kingdom
NEZS staff participation in the Jane Goodall Institute's 'Roots & Shoots' Awards day	United Kingdom
NEZS Native Species Programme: Ecological audit of Chester Zoo Estate	United Kingdom
NEZS Native Species Programme: North West Dormouse project	United Kingdom
NEZS staff visit to White Oak Conservation Centre Rhino Programme	United States of America
NEZS staff participation at International Congress of Zookeepers Conference	United States of America
NEZS staff attendance: PASA Advisory Council at PASA Managers Meeting	United States of America
NEZS Director General participated in 3rd International Congress on Zoo Keeping	United States of America
NEZS staff participation as invited lecturer at the 8th AZA Conference on Zoo and Wildlife Nutrition	United States of America
NEZS Director General attended the 64th WAZA Annual Conference and the CBSG Steering Committee Meeting, St Louis	United States of America
NEZS staff activities - Participation in Amphibian ARK, international standards for biosecurity of ex situ amphibian populations meeting	United States of America
NEZS staff participation in International Society of Wildlife Endocrinologists workshop	United States of America
NEZS Project Support: Spectacled Bear Conservation Education	Venezuela
NEZS Director General was invited to act as Champion for the WAZA/CBSG Climate Change Taskforce	Worldwide
NEZS Director General was a supporting signatory for the output of the Royal Society, ZSL and the International Programme on the State of the Oceans meeting on The Coral Reef Crisis	Worldwide
NEZS Director General became a key signatory and member of the Amphibian Survival Alliance	Worldwide

Mammal Stocklist page 1

Scientific name	Common Name	Primary Role	Species Roles								IUCN status	Stock 31/12/2008	Received	Born/hatched	DNS (30 days)	Deaths	Disposals	Stock 31/12/2009	Managed Programme
			1. Conservation			2	3	No Current Role											
			Ark	Rescue	Insurance	In situ Support	Conservation Education		Cons Res and Cons Training	General Education	General Research								
Diprotodontia																			
<i>Macropus fuliginosus</i>	Western Grey Kangaroo	Gen Education							x		LC	3.5.0	0	1.0.0	0	0	0	4.5.0	ESB
<i>Macropus rufogriseus fruticus</i>	Red-necked Wallaby											0.7.0	0	0	0	0	0.4.0	0	
Proboscidea																			
<i>Elephas maximus</i>	Asiatic Elephant	Cons In situ Support				x	x	x	x	x	EN	3.7.0	0	0	0	1.0.0	0.1.0	2.6.0	EEP
Scandentia																			
<i>Tupaia belangeri</i>	Northern Tree Shrew	Phase out										2.0.0	0	0	0	0	1.0.0	1.0.0	
Primates																			
<i>Haplemur alaotrensis</i>	Alaotran Gentle Lemur	Cons Rescue		x			x				CR	1.1.0	1.0.0	0	0	0	1.0.0	1.1.0	EEP
<i>Lemur catta</i>	Ring-tailed Lemur	Cons Education					x				NT	17.13.0	0	4.0.0	1.0.0	1.1.0	7.2.0	12.10.0	ESB
<i>Varecia variegata variegata</i>	Black & White Ruffed Lemur	Cons Education					x				CR	1.3.0	0	1.0.1	0.0.1	0	0.2.0	2.1.0	EEP
<i>Varecia rubra</i>	Red Ruffed Lemur	Cons Insurance					x				EN	2.3.0	0	2.0.1	0.0.1	0	0.2.0	4.1.0	EEP
<i>Callithrix geoffroyi</i>	Geoffroy's Marmoset	Gen Education							x		LC	8.5.0	0	2.0.0	0	2.3.0	0	8.2.0	EEP
<i>Leontopithecus chrysopygus</i>	Black Lion Tamarin	Cons Rescue		x			x				EN	1.1.0	0	0	0	0	0	1.1.0	EEP
<i>Saguinus bicolor</i>	Pied Tamarin	Cons Insurance					x				EN	1.1.0	0	0	0	0	0	1.1.0	EEP
<i>Cebus xanthosternos</i>	Buffy-headed Capuchin	Cons Rescue			x		x				CR	6.1.1	0	0.0.1	0	0	0	6.1.2	EEP
<i>Ateles fusciceps rufiventris</i>	Colombian Spider Monkey	Gen Education							x		CR	3.7.0	0	2.3.0	2.2.0	0	0	3.8.0	EEP
<i>Cercopithecus campbellii</i>	Campbell's Monkey											0.2.0	0	0	0	0	0.2.0	0	
<i>Macaca silenus</i>	Lion-tailed Macaque	Cons Education					x		x		EN	6.13.0	0	3.1.2	2.0.1	0.1.0	0	7.13.1	EEP
<i>Macaca nigra</i>	Sulawesi Crested Macaque	Cons Education					x		x		CR	14.17.0	3.0.0	0	0	3.0.0	0	14.17.0	EEP
<i>Mandrillus sphinx</i>	Mandrill	Gen Education							x		VU	7.8.0	0	1.0.0	0	0.1.0	0	8.7.0	EEP
<i>Hylobates lar</i>	Lar gibbon	Gen Education									EN	3.1.0	0	0	0	0	0	3.1.0	ESB
<i>Pan troglodytes</i>	Chimpanzee	Cons In situ Support				x	x			x	EN	8.21.0	0	0.1.0	0	1.2.0	0	7.20.0	ESB
<i>Pongo pygmaeus</i>	Bornean Orang Utan	Cons In situ Support				x	x		x		EN	1.3.0	0.1.0	1.1.0	0	0.1.0	0	2.4.0	EEP
<i>Pongo abelii</i>	Sumatran Orang Utan	Cons Education					x		x		CR	3.4.0	0	0.1.0	0	0	0	3.5.0	EEP
Chiroptera																			
<i>Pteropus rodricensis</i>	Rodrigues Fruit Bat	Gen Education					x		x		CR	27.52.0	0	19.7.3	0.0.2	9.9.1	0	37.50.0	EEP
<i>Pteropus livingstonii</i>	Livingstone's Fruit Bat	Cons Insurance			x				x		EN	4.0.0	0	0	0	1.0.0	0	3.0.0	ESB
<i>Carollia perspicillata</i>	Seba's Short-tailed Bat	Cons Education							x		LC	0.0.400	0	284	71	104	112	0.0.397	
Carnivora																			
<i>Speothos venaticus</i>	Bush Dog	Gen Education							x		NT	1.2.0	0	2.1.0	0	0.1.0	0	3.2.0	EEP
<i>Ailurus fulgens fulgens</i>	Red Panda	Cons In situ Support				x	x		x		VU	3.1.0	0	0	0	0	2.0.0	1.1.0	EEP
<i>Tremarctos ornatus</i>	Spectacled Bear	Cons In situ Support				x	x		x		VU	1.1.0	0.1.0	0	0	0.1.0	0	1.1.0	EEP
<i>Nasua nasua</i>	Coati	Gen Education							x		LC	0.10.0	0	0	0	0.3.0	0	0.7.0	
<i>Aonyx cinerea</i>	Oriental Small-clawed Otter	Gen Education							x		VU	0.8.0	1.0.0/0	0	0	0/0.1.0	0	1.1/0.6	
<i>Aonyx cinerea</i>	Oriental Small-clawed Otter	Gen Education							x		VU	0.8.0	1.0.0/0	0	0	0/0.1.0	0	1.1/0.6	
<i>Suricata suricatta</i>	Slender-tailed Meerkat	Gen Education							x		LC	1.1.4	3.4.0	0	0	2.2.0	1.0.4	1.3.0	
<i>Mungos mungo</i>	Banded Mongoose	Gen Education							x		LC	4.6.0	0	0.4.2	0.0.2	0.1.0	1.1.0	3.8.0	
<i>Helogale parvula</i>	Dwarf Mongoose	Gen Education									LC	0.0.0	3.1.0	0	0	0	0	3.1.0	
<i>Cynictis pencilata</i>	Yellow Mongoose	Gen Education							x		LC	2.3.0	0	2.1.2	0.0.2	2.2.0	0	2.2.0	
<i>Cynictis pencilata</i>	Yellow Mongoose	Gen Education							x		LC	2.3.0	0	2.1.2	0.0.2	2.2.0	0	2.2.0	
<i>Panthera leo persica</i>	Asiatic Lion	Cons Insurance			x		x		x		EN	2.1.0	0	0	0	1.0.0	0	1.1.0	EEP
<i>Panthera tigris sumatrae</i>	Sumatran Tiger	Cons Insurance			x		x		x		CR	1.1.0	1.0.0	0	0	0	1.0.0	1.1.0	EEP
<i>Panthera onca</i>	Jaguar	Cons In situ Support				x	x	x	x		NT	3.2.0	0	0	0	0	0	3.2.0	ESB
<i>Acinonyx jubatus soemmeringii</i>	Cheetah	Cons Education					x		x		VU	4.0.0	0.1.0	0	0	0	1.0.0	3.1.0	EEP
<i>Leptailurus serval</i>	Serval	Gen Education							x		LC	0.0.0	2.0.0	0	0	0	0	2.0.0	
Pinnipedia																			
<i>Zalophus californianus</i>	Californian Sealion	Gen Education							x		LC	1.1.0	0.2.0	0	0	0.1.0	0	1.2.0	ESB

Mammal Stocklist page 2

Scientific name	Common Name	Primary Role	Species Roles								IUCN status	Stock 31/12/2008	Received	Born/hatched	DNS (30 days)	Deaths	Disposals	Stock 31/12/2009	Managed Programme
			1. Conservation					2	3	No Current Role									
			Ark	Rescue	Insurance	In situ Support	Conservation Education	Cons Res and Cons Training	General Education										
Perissodactyla																			
<i>Equus przewalskii</i>	Przewalski's Horse	Phase out									CR	1.3.0	0	1.0.0	0	1.0.0	0	1.3.0	EEP
<i>Equus grevyi</i>	Grevy's Zebra	Cons Insurance			x	x		x			EN	5.0.0	0	0	0	0	1.0.0	4.0.0	EEP
<i>Equus hemionus onager</i>	Persian Onager	Cons Rescue		x		x		x			EN	1.3.0	0.1.0	1.1.0	1.1.0	0.1.0	0	1.3.0	EEP
<i>Tapirus terrestris</i>	South American Tapir	Cons In situ Support				x	x	x			VU	1.2.0	0	0	0	0	0.1.0	1.1.0	EEP
<i>Diceros bicornis michaeli</i>	Eastern Black Rhinoceros	Cons Rescue		x		x	x	x			CR	3.5.0	0	0.1.0	0	0	0	3.6.0	EEP
<i>Rhinoceros unicornis</i>	Indian Rhinoceros	Cons Education				x		x			VU	1.1.0	0	0	0	1.0.0	0	0.1.0	EEP
Artiodactyla																			
<i>Babyrousa babyrussa</i>	Northern Babirusa	Gen Education						x			VU	2.1.0	0	0.2.2	0.1.2	0.1.0	1.0.0	1.1.0	EEP
<i>Potamochoerus porcus</i>	Red River Hog	Gen Education						x			LC	1.3.0	0	2.1.0	0	2.1.0	0	1.3.0	EEP
<i>Phacochoerus africanus</i>	Warthog	Gen Education						x			LC	1.1.0	0	0	0	0	0	1.1.0	ESB
<i>Sus cebifrons negrinus</i>	Visayan Warty Pig	Cons Insurance			x	x	x	x			CR	4.3.0	0	2.1.1	0.0.1	1.0.0	0.1.0	5.3.0	EEP
<i>Vicugna vicugna</i>	Vicuna	Cons Education					x	x			LC	1.3.0	0	1.0.0	0	0	0	2.3.0	EEP
<i>Lama guanicoe</i>	Guanaco											2.5.0	0	0	0	0	2.5.0	0	
<i>Camelus bactrianus ferus</i>	Bactrian Camel	Gen Education						x			CR	0.2.0	0.3.0	0	0	0.1.0	0	0.4.0	
<i>Pudu pudu</i>	Chilean Pudu	Gen Education						x			VU	1.0.0	0.1.0	0	0	0	0	1.1.0	EEP
<i>Rusa alfredi</i>	Philippine Spotted Deer	Cons Insurance			x	x	x	x			EN	6.4.0	1.0.0	0	0	2.0.0	4.1.0	1.3.0	EEP
<i>Rucervus eldii thamin</i>	Burmese Brow-antlered Deer	Gen Education						x			EN	5.11.0	1.0.0	3.3.0	0.1.0	1.1.0	3.1.0	5.11.0	
<i>Giraffa camelopardalis rothschildi</i>	Rothschild Giraffe	Gen Education						x			LC	1.5.0	0.1.0	0.1.1	0.0.1	0.1.0	0.2.0	1.4.0	EEP
<i>Okapia johnstoni</i>	Okapi	Cons In situ Support				x	x	x			NT	1.1.0	1.0.0	0	0	0	1.0.0	1.1.0	EEP
<i>Syncerus caffer nanus</i>	Congo Buffalo	Gen Education						x			LC	1.5.0	0	1.0.0	0	1.0.0	0	1.5.0	ESB
<i>Tragelaphus eurycerus</i>	Eastern Bongo	Cons Education					ö	x			CR	1.4.0	0	0	0	0	1.0.0	0.4.0	EEP
<i>Tragelaphus speikii gratus</i>	West African Sitatunga	Gen Education						x			LC	6.9.0	0	5.1.0	1.0.0	0.1.0	2.1.0	8.8.0	ESB
<i>Kobus leche kafuensis</i>	Kafue Flats Red Lechwe	Gen Education			x			x			VU	0.8.0	1.0.0	0	0	0.2.0	0	1.6.0	ESB
<i>Oryx dammah</i>	Scimitar-horned Oryx	Cons Ark	x			x					EW	6.7.0	0	0.2.2	0.1.2	3.2.0	1.0.0	2.6.0	EEP
<i>Oryx gazella gazella</i>	Gemsbok	Gen Education									LC	1.3.0	0	0.3.0	0.1.0	0	0	1.5.0	
<i>Antelope cervicapra</i>	Blackbuck	Gen Education						x			NT	1.11.0	0	0	0	0.1.0	0	1.10.0	
<i>Madoqua kirkii</i>	Kirk's Dik-dik	Gen Education						x			LC	1.1.0	1.0.0	0.1.0	0	0	0	2.2.0	ESB
<i>Hippotragus equinus</i>	Roan Antelope	Cons Education					x	x			LC	0	2.2.0	0	0	0	0	2.2.0	EEP
<i>Bubalus depressicornis</i>	Lowland Anoa	Cons Education					x				VU	0	0	0	0	0	1.0.0	1.0.0	EEP
<i>Cephalophus natalensis</i>	Red Forest Duiker	Gen Education					x	x			LC	0	0.1.0	0	0	0	0	0.1.0	
Rodentia																			
<i>Cynomys ludovicianus</i>	Prairie Marmot	Phase out									LC	2.1.1	0	0	0	1.0.1	0	1.1.0	
<i>Hystrix africaeaustralis</i>	Crested Porcupine	Gen Education						x			LC	1.1.0	0	0.0.3	0.0.2	0	0	1.1.1	
<i>Acomys cilicicus</i>	Turkish Spiny Mouse	Gen Education						x			DD	0.0.102	0	535	201	214	24	0.0.198	
<i>Acomys sp.</i>	Black Spiny Mouse	Gen Education						x			DD	0.0.32	0	90	37	30	11	0.0.44	
<i>Lemniscomys striatus</i>	Spotted Grass Mouse	Gen Education						x			LC	0.0.9	0	0.0.12	0	0.0.3	0.0.8	0.0.10	
<i>Thallomys sp.</i>	Acacia Rat	Gen Education						x			LC	0.0.11	0	0.0.12	0	0.0.10	0	0.0.13	
<i>Hydrochaeris hydrochaeris</i>	Capybara	Gen Education						x			LC	1.2.0	0	1.1.1	1.0.1	0.1.0	0	1.2.0	
<i>Dasyprocta azarae</i>	Azara's Agouti	Gen Education						x			DD	2.4.0	0	0	0	1.0.0	0.3.0	1.1.0	ESB
<i>Micromys minutus</i>	Harvest Mouse	Cons Education				x	x	x			LC	35.35.0	6.4.0	9.9.4	0	26.26.0	8.0.0	16.22.4	
<i>Cricetomys emini</i>	Giant Pouched Rat											1.0.0	0	0	0	0	1.0.0	0	
<i>Cricetomys gambius</i>	Forest Giant Pouched Rat	Gen Education						x			LC	0	1.1.0	0	0	0	0	1.1.0	
<i>Graphiurus murinus</i>	African Woodland Dormouse	Gen Education						x			LC	0.0.17	0	0.0.10	0.0.3	0.0.6	0	0.0.18	

Bird Stocklist page 1

Scientific name	Common Name	Primary Role	Species Roles								IUCN status	Stock 31/12/2008	Received	Born/hatched	DNS (30 days)	Deaths	Disposals	Stock 31/12/2009	Managed Programme
			1. Conservation			2	3	No Current Role											
			Ark	Rescue	Insurance	In situ Support	Conservation Education		Cons Res and Cons Training	General Education	General Research								
Struthioniformes																			
<i>Struthio camelus</i>	Ostrich	Gen Education							X			0.2	0	0	0	0	0	0.2	
Rheiformes																			
<i>Rhea americana</i>	Common Rhea	Gen Education							X			1.23	0	0	0	0.01	0	1.22	
Casuariformes																			
<i>Casuaris casuaris</i>	Southern Cassowary	Cons Education					X					1.1	0	0	0	0	0	1.1	ESB
<i>Dromaius novaehollandiae</i>	Emu											1.0	0	0	0	0	1.0	0	
Sphenisciformes																			
<i>Spheniscus humboldti</i>	Humboldt's Penguin	Cons Education					X		X			12.13.27	0	0.010	0.01	0.01	3.3.2	9.10.33	EEP
Pelecaniformes																			
<i>Pelecanus crispus</i>	Dalmatian Pelican	Gen Education							X			5.2	0.2	0	0	0.1	0	5.3	EEP
Ciconiiformes																			
<i>Egretta garzetta</i>	Little Egret	Gen Education							X			0.14	0	0	0	0	0	0.14	
<i>Scopus umbretta</i>	Hamerkop	Gen Education							X			0.1	1.0	0	0	0	0	1.1	ESB
<i>Ciconia ciconia ciconia</i>	White Stork	Gen Education							X			2.12	0	0	0	0	0	2.12	
<i>Ciconia nigra</i>	Black Stork	Cons Education					X					1.1	0	0	0	0	0	1.1	ESB
<i>Eudocimus ruber</i>	Scarlet Ibis											2.2	0	0	0	1.0	1.2	0	
<i>Geronticus eremita</i>	Northern Bald Ibis	Cons Rescue		X		X	X					10.7.8	0	0.012	0.01	2.0	0	11.12.11	EEP
<i>Platalea leucorodia</i>	European Spoonbill	Cons Education					X					3.22	0	0	0	0	0	3.22	
Phoenicopteriformes																			
<i>Phoenicopus chilensis</i>	Chilean Flamingo	Gen Education							X			12.19.65	0	0.018	0.08	0.01	0.08	12.19.66	
<i>Phoenicopus ruber</i>	Caribbean Flamingo	Gen Education							X			18.10.56	0	0.09	0.01	0.11	0	18.9.63	
Anseriformes																			
<i>Dendrocygna arborea</i>	West Indian Whistling Duck	Phase out									X	2.45	0	0.04	0.01	0.1	0.03	2.35	
<i>Dendrocygna viduata</i>	White-faced Whistling Duck	Gen Education							X			0	1.0	0	0	0	0	1.0	
<i>Cygnus melanocoryphus</i>	Black-necked Swan	Phase out							X			1.2	0	0.12	0.02	0	0.1	1.2	
<i>Anser erythropus</i>	Lesser White-fronted Goose	Phase out					X					0.13	0	0	0	0.11	0	0.02	
<i>Anser rossii</i>	Ross' Snow Goose	Phase out							X			2.12	0	0.03	0	0	0.03	2.12	
<i>Branta ruficollis</i>	Red-breasted Goose	Cons Education					X					3.14	0	0	0	0	0	3.14	
<i>Branta sandvicensis</i>	Hawaiian Goose	Phase out			X		X					1.1	0	0.02	0.01	0	0.01	1.1	
<i>Anas punctata</i>	Hottentot Teal	Gen Education							X			0	2.1	0.03	0	1.0	0	1.13	
<i>Anas formosa</i>	Baikal Teal	Cons Education					X					2.2	0	0	0	0.1	0	2.1	
<i>Anas falcata</i>	Falcated Teal	Gen Education							X			4.3	0	0.08	0.04	2.0	0.04	2.3	
<i>Anas georgica spinicauda</i>	Chilean Pintail	Phase out							X			1.0	0	0	0	0	0	1.0	
<i>Anas platyrhynchos laysanensis</i>	Laysan Duck	Phase out			X		X					2.2	0	0.02	0.01	1.0	0.01	1.2	
<i>Anas querquedula</i>	Garganey	Phase out					X					0.04	0	0.05	0.03	0	0.02	0.04	
<i>Marmaronetta angustirostris</i>	Marbled Teal	Cons Education					X					3.26	0	0.06	0.01	0	0.05	3.26	
<i>Somateria mollissima</i>	Common Eider	Phase out							X			0.011	0	0.014	0.01	0.02	0.012	0.010	
<i>Aythya baeri</i>	Baer's Pochard	Cons Education					X					4.45	0	0.011	0.03	0.01	0.07	4.45	
<i>Aythya nyroca</i>	Ferruginous Duck	Cons Education					X					1.28	0	0.013	0.09	0.1	0.03	1.19	
<i>Netta rufina</i>	Red-crested Pochard	Phase out							X			5.32	0	1.016	0.06	0.11	0.04	6.27	
<i>Aix galericulata</i>	Mandarin Duck	Gen Education							X			0.012	0	0	0	0.05	0	0.07	
<i>Mergus albellus</i>	Smew	Cons Education					X					0.1	0	0	0	0	0	0.1	
<i>Mergus cucullatus</i>	Hooded Merganser	Phase out							X			1.26	0	0.06	0.06	1.0	0	0.26	
<i>Oxyura leucocephala</i>	White-headed Duck	Cons Insurance			X	X	X	X				3.3	0	0.010	0.06	0.02	0	3.32	
Falconiformes																			
<i>Coragyps atratus</i>	American Black Vulture	Gen Education							X			0.1	0	0	0	0	0	0.1	
<i>Vultur gryphus</i>	Andean Condor	Gen Education							X			1.1	0	0	0	0	0	1.1	EEP
<i>Gyps fulvus</i>	Eurasian Griffon Vulture	Cons Education					X					1.1	0	0	0	0	0	1.1	ESB
<i>Aegypius monachus</i>	Eurasian Black Vulture	Cons Education					X					1.1	0	0	0	0	0	1.1	
<i>Falco punctatus</i>	Mauritius Kestrel											1.0	0	0	0	0	1.0	0	

Bird Stocklist page 2

Scientific name	Common Name	Primary Role	Species Roles								IUCN status	Stock 31/12/2008	Received	Born/hatched	DNS (30 days)	Deaths	Disposals	Stock 31/12/2009	Managed Programme	
			1. Conservation			2	3	No Current Role												
			Ark	Rescue	Insurance	In situ Support	Conservation Education		Cons Res and Cons Training	General Education	General Research									
Galliformes																				
<i>Gallus gallus</i>	Red Junglefowl	Phase out																		
<i>Crax blumenbachii</i>	Red-billed Curassow	Cons Insurance			X	X						EN	1.1.0	0	0	0	0	0	1.1.0	EEP
<i>Rollulus rouloul</i>	Roul Roul Partridge	Gen Education							X			NT	24.14.0	0	0.0.19	0.0.18	2.6.1	0	20.9.1	
<i>Lophophorus impeyanus</i>	Himalayan Monal	Gen Education							X				2.1.0	0	0	0	0	0	2.1.0	
<i>Chrysolophus amherstiae</i>	Lady Amherst's Pheasant	Gen Education							X				0.1.0	0	0	0	0	0	0.1.0	
<i>Polyplectron emphanum</i>	Palawan Peacock Pheasant	Cons Education					X					VU	4.2.1	0	0.0.1	0	0.0.1	1.0.0	3.2.1	EEP
<i>Lophura hatinhensis</i>	Vietnamese Pheasant	Cons Insurance			X							EN	2.2.0	0	0	0	0	0	2.2.0	
<i>Lophura erythrophthalma erythrophthalma</i>	Malay Crestless Fireback	Cons Insurance					X					VU	1.0.0	0	0	0	0	0	1.0.0	ESB
<i>Lophura inornata inornata</i>	Salvadori's Pheasant	Cons Insurance			X							VU	2.3.0	0	0	0	0	0	2.3.0	
<i>Pavo cristatus</i>	Indian Blue Peafowl	Phase out											1.0.0	0	0	0	1.0.0	0	0	
<i>Pavo muticus muticus</i>	Javan Green Peafowl	Cons Education			X				X			EN	1.0.0	0	0	0	0	0	1.0.0	
<i>Afropavo congensis</i>	Congo Peafowl	Cons Insurance			X		X					VU	2.2.0	0.1.0	0	0	1.2.0	0	1.1.0	EEP
<i>Arborophila gingica</i>	Collared Hill Partridge												0	1.0.0	0	0	1.0.0	0	0	
<i>Tragopan satyra</i>	Satyr Tragopan												1.0.0	0	0	0	1.0.0	0	0	
<i>Gallus gallus</i>	Domestic Chicken												8.24.0	0	0	0	5.1.0	3.23.0	0	
<i>Lophura edwardsi</i>	Edward's Pheasant												1.0.0	0	0	0	0	1.0.0	0	
Gruiformes																				
<i>Grus japonensis</i>	Red-crowned Crane	Cons Insurance			X		X	X				EN	2.1.0	0	0	0	0	1.0.0	1.1.0	EEP
<i>Bucconeranus carunculatus</i>	Wattled Crane	Cons In situ Support				X		X				VU	1.1.0	0	0	0	0	0	1.1.0	ESB
<i>Anthropoides paradisiae</i>	Blue Crane	Cons In situ Support				X	X	X				VU	1.1.0	0	0	0	1.0.0	0	0.1.0	ESB
<i>Balea pavarina pavarina</i>	West African Crowned Crane	Cons In situ Support				X		X				NT	2.2.0	0	0.0.1	0	0.1.0	0	2.1.1	ESB
Charadriiformes																				
<i>Vanellus vanellus</i>	Northern Lapwing	Cons Education					X						0.0.6	0	0	0	0.0.2	0	0.0.4	
<i>Vanellus armatus</i>	Blacksmith Plover	Gen Education							X				0	1.1.0	0	0	1.1.0	0	0	
<i>Vanellus coronatus</i>	Crowned Lapwing												0.1.0	0	0	0	0	0.1.0	0	
Columbiformes																				
<i>Columba guinea</i>	Speckled Pigeon	Phase out							X				0.0.40	0	0.0.1	0.0.1	0.0.2	0.0.16	0.0.22	
<i>Columba livia</i>	Rock Dove	Gen Education							X				0.0.12	0	0	0	0.0.3	0	0.0.9	
<i>Ocyphaps lophotes</i>	Crested Bronzewing Pigeon	Phase out							X				0.0.7	0	0	0	0	0	0.0.7	
<i>Gallucolumba criniger</i>	Mindanao Bleeding-heart Dove	Cons Insurance			X	X	X	X				EN	3.4.0	0	1.0.1	0	0	0.3.0	4.1.1	ESB
<i>Gallucolumba luzonica</i>	Luzon Bleeding-heart Dove	Cons In situ Support				X	X					NT	2.4.1	0	0.0.1	0.0.1	0.1.0	1.3.1	1.0.0	ESB
<i>Gallucolumba rufigula</i>	Golden Heart Pigeon	Gen Education							X				2.0.0	0	0	0	0	0	2.0.0	
<i>Zenaidura macroura graysoni</i>	Socorro Dove	Cons Ark	X				X	X				EW	2.1.0	0.2.0	1.0.3	0	0.0.1	1.0.0	2.3.2	EEP
<i>Ducula bicolor</i>	Pied Imperial Pigeon	Gen Education							X				0.0.13	0	0.0.3	0	0	0	0.0.16	
<i>Goura victoria</i>	Victoria Crowned Pigeon	Gen Education							X			VU	1.1.0	0	0	0	0	0	1.1.0	ESB
<i>Caloenas nicobarica</i>	Nicobar Pigeon	Cons Education					X					NT	2.0.0	1.1.0	0	0	0	0	3.1.0	
<i>Leucosarcia melanoleuca</i>	Wonga Pigeon	Phase out							X				0.1.0	0	0	0	0	0	0.1.0	
<i>Otidiphaps nobilis nobilis</i>	Green-naped Pheasant Pigeon	Cons Res & Cons Train						X					1.1.0	0	0.0.2	0.0.2	0	0	1.1.0	
<i>Otidiphaps nobilis aruensis</i>	White-naped Pheasant Pigeon	Cons Res & Cons Train			X			X					1.1.0	0	0	0	0	0	1.1.0	ESB
<i>Geopelia cuneata</i>	Diamond Dove												1.0.0	0	0	0	0	1.0.0	0	
<i>Phaps chalcoptera</i>	Bronzewing Pigeon												1.0.0	0	0	0	0	1.0.0	0	

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Scientific name	Common Name	Primary Role	Species Roles								IUCN status	Stock 31/12/2008	Received	Born/hatched	DNS (30 days)	Deaths	Disposals	Stock 31/12/2009	Managed Programme	
			1. Conservation			2	3	No Current Role												
			Ark	Rescue	Insurance	In situ Support	Conservation Education		Cons Res and Cons Training	General Education	General Research									
Piciformes																				
<i>Trachyphonus erythrocephalus</i>	Red and Yellow Barbet	Gen Education							X			0	1.1.0	0	0	0.1.0	0	1.0.0		
<i>Lybius melanopterus</i>	Brown-breasted Barbet	Gen Education							X			0	2.1.0	0	0	0	1.0.0	1.1.0		
Passeriformes																				
<i>Irena puella</i>	Fairy Bluebird	Gen Education							X			1.3.0	2.0.0	1.1.3	0.0.3	0	1.1.0	3.3.0		
<i>Copsychus malabaricus</i>	White-rumped Shama	Cons Res & Cons Train						X	X			1.0.0	1.2.0	0	0	0	0	2.2.0		
<i>Myiophonus glaucinus</i>	Javan Whistling Thrush	Phase out							X			2.1.1	0	0	0	0	2.1.1	0		
<i>Dryonastes courtosi</i>	Blue-crowned Laughingthrush	Cons Insurance			X	X						CR	5.4.0	0.2.0	0.1.2	0	0	1.3.0	4.3.3	ESB
<i>Garrulax leucolophus bicolor</i>	Sumatran Laughingthrush	Cons Education			X		X					VU	1.1.0	0.3.0	0	0	0	1.4.0	ESB	
<i>Garrulax leucolophus</i>	White-crested Laughingthrush											0	0.0.1	0	0	0	0.0.1	0		
<i>Trochalopteron milnei</i>	Red-tailed Laughingthrush	Gen Education							X			1.1.0	0	0.1.1	0.0.1	0	0	1.2.0		
<i>Zoothera citrina</i>	Orange-headed Thrush	Gen Education							X			2.2.0	0	2.5.6	1.0.3	0	0.1.2	3.6.1		
<i>Zoothera dohertyi</i>	Chestnut-backed Thrush	Cons Education			X		X	X				NT	3.3.1	0	2.0.4	0.0.2	1.0.3	1.0.0	3.3.0	ESB
<i>Turdus rubrocanus</i>	Chestnut Thrush											1.0.0	0	0	0	0	1.0.0	0		
<i>Cossypha niveicapilla</i>	Snowy-crowned Robin Chat	Gen Education							X			0	0.2.0	0	0	0	0	0.2.0		
<i>Liocichla omeiensis</i>	Grey-cheeked Liocichla	Cons In situ Support				X	X		X			VU	3.2.0	0	1.1.0	0	1.0.0	3.3.0	ESB	
<i>Yuhina diademata</i>	White-collared Yuhina	Gen Education							X			1.0.0	0	0	0	0	0	1.0.0		
<i>Zosterops poliogaster kikuyuensis</i>	African Montane White-eye	Cons Res & Cons Train						X				0.0.3	0.2.1	0	0	0.0.1	0	0.2.3		
<i>Niltava sundara</i>	Rufous-bellied Niltava	Cons Res & Cons Train						X				1.1.0	1.1.0	0	0	0	0	2.2.0		
<i>Leiothrix lutea</i>	Pekin Robin	Cons Res & Cons Train						X	X			0.0.47	0	0.0.20	0.0.4	0.0.18	0.0.18	1.0.26		
<i>Paroaria dominicana</i>	Red-cowled Cardinal	Phase out							X			1.1.0	0	0	0	0.1.0	0	1.0.0		
<i>Icterus oberi</i>	Montserrat Oriole	Cons Insurance			X		X	X				CR	1.1.0	0	0.0.3	0.0.1	0.1.0	0	1.0.2	
<i>Coccothraustes affinis</i>	Collared Grosbeak	Cons Education					X					0	1.1.0	0	0	1.0.0	0	0.1.0		
<i>Padda oryzivora</i>	Java Sparrow	Gen Education							X			VU	0.0.81	0	10	0	1	18	0.0.72	
<i>Padda fuscata</i>	Timor Sparrow	Cons Education					X	X				NT	0.0.18	0	0.0.7	0.0.1	0.0.5	0.0.19		
<i>Poephila guttata guttata</i>	Timor Zebra Finch	Cons Education					X					0.0.2	0	0	0	0	0	0.0.2		
<i>Dinemellia dinimelli</i>	White-headed Buffalo Weaver	Gen Education							X			0	1.1.0	0	0	0	0	1.1.0		
<i>Ploceus castaneiceps</i>	Taveta Golden Weaver	Gen Education							X			1.0.0	0	0	0	0	0	1.0.0		
<i>Foudia madagascariensis</i>	Madagascar Fody	Cons Res & Cons Train				X	X	X	X			0.0.2	0	0	0	0	0	0.0.2		
<i>Ploceus cucullatus cucullatus</i>	Village Weaver	Gen Education							X			9.1.0	0	0.0.6	0	1.0.0	0	8.1.6		
<i>Ploceus cucullatus collaris</i>	Black-headed Weaver	Phase out							X			3.2.0	0	0	0	1.1.0	2.1.0	0		
<i>Scissirostrum dubium</i>	Grosbeak Starling	Gen Education							X			1.4.2	0	0.0.2	0.0.2	0	0	1.4.2		
<i>Aplonis panayensis</i>	Asian Glossy Starling	Gen Education							X			0.0.17	0	0.0.2	0	0	0	0.0.19		
<i>Cinnyricinclus leucogaster</i>	Amethyst Starling	Gen Education							X			3.1.0	0	0	0	0	0	0.1.3		
<i>Spreo bicolor</i>	African Pied Starling	Phase out							X			3.6.1	0	0.0.2	0.0.1	0.1.0	3.5.1	0.0.1		
<i>Lamprotornis iris</i>	Emerald Starling	Gen Education							X			DD	0.0.23	0	0.0.4	0.0.1	0.0.1	0	0.0.25	
<i>Spreo superbus</i>	Superb Starling	Gen Education							X			0.1.5	0	0.0.5	0.0.2	0.0.4	0	0.1.4		
<i>Cosmopsarus regius</i>	Royal Starling	Gen Education							X			1.0.0	0.0.1	0	0	0	0	1.0.1		
<i>Leucopsar rothschildi</i>	Bali Starling	Cons Rescue		X	X		X					CR	3.3.0	0	0	0	0.1.0	1.1.0	2.1.0	EEP
<i>Paradisaea rubra</i>	Red Bird of Paradise	Cons Res & Cons Train					X	X				VU	3.0.0	0.3.0	0	0	0	3.3.0		
<i>Urocissa erythrorhyncha</i>	Red-billed Blue Magpie	Gen Education							X			0.1.0	1.1.0	0	0	0.1.0	0	1.1.0		
<i>Cyanopica cyana</i>	Azure-winged Magpie	Gen Education							X			2.2.1	0	0	0	0	1.0.1	1.2.0		
<i>Pyrhocorax pyrrhocorax</i>	Red-billed Chough	Cons Education			X	X	X	X				1.1.0	0	0	0	0	0	1.1.0		
<i>Ramphocelus bresilius</i>	Brazilian Tanager	Gen Education							X			0	1.1.0	0	0	0	0	1.1.0		

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Scientific name	Common Name	Primary Role	Species Roles							IUCN status	Stock 31/12/2008	Received	Born/hatched	DNS (30 days)	Deaths	Disposals	Stock 31/12/2009	Managed Programme		
			1. Conservation			2	3	No Current Role												
			Ark	Rescue	Insurance	In situ Support	Conservation Education		Cons Res and Cons Training	General Education	General Research									
Serpentes																				
Snakes																				
Boidae																				
<i>Morelia viridis</i>	Green Tree Python	Gen Education							x			0.1.0	0	0	0	0	0	0.1.0		
<i>Corallus caninus</i>	Emerald Tree Boa	Gen Education							x			0.0.2	0	0	0	0	0	0.2.0		
<i>Epicrates subflavus</i>	Jamaican Boa	Cons Education					x					VU	16.8.0	0	0.0.17	0.0.16	0.0.1	0	16.8.0	EEP
<i>Sanzinia madagascariensis</i>	Madagascar Tree Boa											1.1.0	0	0	0	0	1.1.0	0		
<i>Eunectes murinus</i>	Green Anaconda	Phase out							x			1.2.0	0	0	0	0.1.0	0	1.1.0		
<i>Morelia boeleni</i>	Boelen's Python	Gen Research								x		1.1.0	0	0	0	0	0	1.1.0		
<i>Python reticulatus</i>	Reticulated Python	Gen Education					x		x			0.2.0	0	0	0	0	0	0.2.0		
Colubridae																				
<i>Boiga dendrophila</i>	Mangrove Snake	Gen Education							x			1.2.0	0	0.0.4	0	0	0	1.2.4		
<i>Gonyosoma oxycephala</i>	Red-tailed Racer	Gen Education							x			2.6.0	0	0.0.6	0	0	1.3.0	1.3.6		
<i>Spilotes pullatus</i>	Tiger Ratsnake	Gen Education							x			0.0.2	0	0	0	0.0.1	0	0.0.1		
<i>Elaphe carinata</i>	King Rat Snake	Phase out										2.2.0	0	0	0	1.0.0	0	1.2.0		
<i>Elaphe guttata</i>	Corn Snake	Gen Education							x			2.3.0	0	0	0	0	0	2.3.0		
<i>Elaphe obsoleta obsoleta</i>	Black Ratsnake	Phase out							x			1.0.0	0	0	0	0	0	1.0.0		
<i>Rhynchophis boulengeri</i>	Rhinoceros Ratsnake	Gen Education							x			0	1.1.0	0	0	0	0	1.1.0		
<i>Thamnophis sirtalis tetrataenia</i>	San Francisco Garter Snake	Cons Insurance			x		x		x			0	0.2.0	0	0	0	0	0.2.0	ESB	
Elapidae																				
<i>Dendroaspis angusticeps</i>	East African Green Mamba											1.1.0	0	0	0	0.1.0	1.0.0	0		
<i>Naja annulifera</i>	Snouted Cobra											1.1.0	0	0	0	0	1.1.0	0		
Viperidae																				
<i>Bothriechis schlegelii</i>	Eyelash Viper	Gen Education							x	x		1.2.0	2.0.0	0	0	0.1.0	0	3.1.0		
<i>Bitis gabonica</i>	Gaboon Viper	Cons Education					x		x			0.2.0	0	0	0	0	0	0.2.0		
<i>Bitis nasicornis</i>	Rhinoceros Viper	None										2.0.0	0	0	0	0	2.0.0	0		
<i>Cryptelytrops albolabris</i>	White-lipped Viper	Gen Education							x			2.1.0	0	0	0	0	0	2.1.0		
Sauria																				
Lizards																				
Agamidae																				
<i>Acanthosaura capra</i>	Forest Lizard	Gen Education							x			0.0.3	1.2.0	0	0	0.1.0	0.0.3	1.1.0		
<i>Uromastyx dispar</i>	Sudanese Uromastyx	Phase out							x			2.3.0	0	0	0	0	0	2.3.0		
Chamaeleonidae																				
<i>Chamaeleo calyptratus</i>	Yemen Chameleon	Gen Education							x			3.3.0	0	1.3.15	0	1.3.0	2.2.13	1.1.2		
Helodermatidae																				
<i>Heloderma suspectum</i>	Gila Monster	Gen Education							x			NT	2.3.0	0	0	0	0.2.0	0	2.1.0	EEP
<i>Heloderma horridum</i>	Beaded Lizard	Gen Education							x			LC	3.2.1	0	0	0	0	3.2.1	EEP	
Iguanidae																				
<i>Brachylophus fasciatus</i>	Fiji Banded Iguana	Gen Research								x		EN	0.1.0	1.0.0	0	0	0.1.0	0	1.0.0	
<i>Ctenosaura bakeri</i>	Utila Island Iguana	Cons Insurance			x							CR	1.1.0	0	0	0	0	1.1.0	ESB	
<i>Cyclura cornuta</i>	Rhinoceros Iguana	Phase out					x		x			VU	0.2.0	0	0	0	0.1.0	0.1.0	ESB	
<i>Iguana delicatissima</i>	Lesser Antillean Iguana	Cons Education					x					VU	1.1.0	0	0	0	0	1.1.0		
Lacertidae																				
<i>Lacerta agilis</i>	Sand Lizard	Cons In situ Support				x			x			0.0.20	0	0.0.3	0	0.0.1	0	c.22	SRP	

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Scientific name	Common Name	Primary Role	Species Roles							IUCN status	Stock 31/12/2008	Received	Born/hatched	DNS (30 days)	Deaths	Disposals	Stock 31/12/2009	Managed Programme
			Ark	Rescue	Insurance	In situ Support	Conservation Education	Cons Res and Cons Training	2 General Education									
Scincidae																		
<i>Corucia zebrata</i>	Prehensile-tailed Skink										1.0.2	0	0	0	0	1.0.2	0	
Phrynosomatidae																		
<i>Sceloporus cyanogenys</i>	Blue Spiny Lizard	Gen Education							x		0	3.3.0	0	0	0	3.3.0		
Teiidae																		
<i>Dracaena guianensis</i>	Caiman Lizard	Cons Education				x		x			0.0.5	0	0	0	0	0.0.5		
Varanidae																		
<i>Varanus indicus</i>	Mangrove Monitor	Gen Education						x			1.1.0	0	0	0	0	1.1.0		
<i>Varanus komodoensis</i>	Komodo Dragon	Cons Education			x	x		x		VU	4.1.0	0	0	0	0	2.0.0	2.1.0	EEP
<i>Varanus prasinus</i>	Emerald Tree Monitor	Gen Education						x			1.1.0	0	0	0	0.1.0	0	1.0.0	ESB
<i>Varanus salvadorii</i>	Crocodile Monitor	Gen Education						x			1.0.0	0.1.0	0	0	0	0	1.1.0	Monitor
<i>Varanus varius</i>	Lace Monitor										1.1.0	0	0	0	0	1.1.0	0	
Testudines																		
Turtles																		
Bataguridae																		
<i>Cuora galbinifrons</i>	Flower-back Box Turtle	Cons Rescue	x						x	CR	1.2.5	0	0	0	0	0	1.2.5	TSA
<i>Cuora trifasciata</i>	Three-striped Box Turtle	Cons Rescue	x							CR	1.1.4	1.0.0	0.0.4	0	0	1.0.0	1.1.8	TSA
<i>Cuora zhoui</i>	Zhou's Box Turtle	Cons Rescue	x				x		x	CR	1.1.0	0	0	0	0	0	1.1.0	TSA
<i>Geoemyda spengleri</i>	Black-breasted Leaf Turtle	Cons Insurance		x						EN	2.3.0	0	0	0	0	0	2.3.0	TSA
<i>Heosemys spinosa</i>	Spiny Hill Turtle	Cons Insurance		x						EN	2.4.0	0	0	0	0	0	2.4.0	ESB
<i>Mauremys annamensis</i>	Annam Leaf Turtle	Cons Rescue	x							CR	2.3.0	0	0.0.17	0	0	0.0.10	2.3.7	ESB
<i>Sacalia bealei</i>	Beal's Four-eyed Turtle	Cons Insurance		x						EN	1.1.1	0	0	0	0	0	1.1.1	
<i>Sacalia quadriocellata</i>	Four-eyed Turtle	Cons Insurance		x						EN	2.2.0	0	0	0	0	0	2.2.0	
Carretochelidae																		
<i>Carrettochelys insculpta</i>	Fly River Turtle	Gen Education						x		VU	0.0.2	0	0	0	0	0	0.0.2	
Chelidae																		
<i>Chelodina mccordii</i>	Roti Island Turtle	Cons Rescue		x				x		CR	1.3.0	0	0	0	0	0	1.3.0	TSA
Testudinidae																		
<i>Geochelone nigra</i>	Galapagos Giant Tortoise	Cons Education				x		x		VU	1.3.0	0	0	0	0	0	1.3.0	ESB
<i>Geochelone radiata</i>	Radiated Tortoise	Cons Insurance		x		x		x		CR	2.1.6	0	0.0.1	0	0	0	2.1.7	ESB
<i>Testudo kleinmanni</i>	Egyptian Tortoise	Cons Rescue	x							CR	7.3.0	5.5.0	0	0	0	7.3.0	5.5.0	EEP
Crocodylia																		
Crocodylidae																		
<i>Crocodylus mindorensis</i>	Philippine Crocodile	Cons Insurance		x	x			x		CR	1.1.0	0	0	0	0	0	1.1.0	EEP
Rhyncocephalia																		
Tuatara																		
<i>Sphenodon punctatus</i>	Tuatara	Gen Education						x		LR/lc	1.5.0	0	0	0	0	0	1.5.0	Monitor

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Scientific name	Common Name	Primary Role	Species Roles							IUCN status	Stock 31/12/2008	Received	Born/hatched	DNS (30 days)	Deaths	Disposals	Stock 31/12/2009	Managed Programme
			Ark	Rescue	Insurance	In situ Support	Conservation Education	Cons Res and Cons Training	2 General Education									
Freshwater																		
Adrianichthyidae																		
<i>Xenopoecilus sarasinorum</i>	Duck-billed fish	None									EN	14	0	13	0	9	0	18
Anabantidae																		
<i>Trichogaster leeri</i>	Pearl gourami	Gen Education						x				11	0	1	0	2	0	10
Atherinidae																		
<i>Glossolepis incisus</i>	Red rainbow fish	Gen Education						x		VU	10	0	0	0	0	0	0	10
<i>Melanotaenia lacustris</i>	Lake Kutubu rainbow fish	Gen Education						x		VU	72	0	0	0	28	15	29	
<i>Melanotaenia praecox</i>	Dwarf rainbow fish	Phase out							x	DD	4	0	0	0	0	0	4	
Callichthyidae																		
<i>Corydoras panda</i>	Panda catfish	None							x		30	0	0	0	10	0	20	
<i>Corydoras reticulatus</i>	Reticulated corydoras	None							x		9	0	0	0	0	0	9	
<i>Corydoras sterbai</i>	Sterba's cory	None							x		0	20	85	21	8	0	76	
<i>Corydoras arcuatus</i>	Skunk catfish	Phase out							x		1	0	0	0	0	0	1	
Ceratodontidae																		
Characidae																		
<i>Astyanax mexicanus jordani</i>	Mexican Blind Cave Fish	Gen Education						x			20	0	0	0	1	0	19	
<i>Brycinus longipinnis</i>	Long-finned Characin	None							x		200	0	36	0	0	36	200	
<i>Hemigrammus rhodostomus</i>	Rummy-nose tetra	Gen Education						x			0	97	0	0	64	0	33	
<i>Paracheirodon axelrodi</i>	Cardinal Tetra	Cons Education				x		x			30	228	0	0	233	0	25	
Cichlidae																		
<i>Konia eisentrautei</i>	Lake Barombi Mbo cichlid	Phase out		x						CR	40	0	3	0	1	12	30	
<i>Labeotropheus fuelleborni</i>	Lake Malawi cichlid	Gen Education				x		x		LC	39	0	156	0	150	0	45	
<i>Labidochromis caeruleus</i>	Lake Malawi cichlid	Gen Education				x		x		LC	15	0	0	0	0	0	15	
<i>Melanochromis auratus</i>	Lake Malawi cichlid	Gen Education				x		x		LC	0	0	0	0	0	0	0	
<i>Paretroplus menarambo</i>	Pin-striped damba	Cons Education				x		x		CR	49	9	20	0	13	0	65	
<i>Pseudotropheus socolofi</i>	Lake Malawi cichlid	Gen Education				x		x		LC	100	0	0	0	0	0	100	
<i>Pseudotropheus zebra</i>	Lake Malawi cichlid	Gen Education				x		x			4	0	0	0	0	0	4	
<i>Pungu maclareni</i>	Lake Barombi Mbo cichlid	Phase out		x						CR	39	0	0	0	1	12	26	
<i>Sarotherodon linnellii</i>	Lake Barombi Mbo cichlid	Phase out		x						CR	45	0	0	0	0	30	15	
<i>Sarotherodon lohbergeri</i>	Lake Barombi Mbo cichlid	Phase out		x						CR	36	0	2	0	0	18	20	
<i>Stomatepia mariae</i>	Lake Barombi Mbo cichlid	Phase out		x						CR	43	0	0	0	22	21	25	
<i>Stomatepia pindu</i>	Lake Barombi Mbo cichlid	Phase out		x						CR	58	0	14	0	0	30	42	
<i>Symphysodon aequifasciata axelrodi</i>	Brown discus	Gen Education				x		x			6	10	0	0	6	0	10	
<i>Yssichromis argens</i>	Lake Victoria cichlid	Phase out							x		43	0	0	0	4	0	39	
<i>Yssichromis pyrrocephalus</i>	Lake Victoria cichlid	Phase out							x	VU	23	0	0	0	10	0	13	
Cobitidae																		
<i>Botia macracantha</i>	Clown loach	Gen Education						x	x		18	0	0	0	0	0	18	
<i>Botia sidthimunki</i>	Dwarf loach	Gen Research		x					x	CR	4	31	0	0	2	0	33	
Cyprinidae																		
<i>Danio malabaricus</i>	Giant danio	None							x		50	0	1513	513	816	0	234	
<i>Danio margaritatus</i>	Celestial pearl danio	Cons Education				x					65	0	15	0	9	0	71	
<i>Garra barreimiae</i>	Omani blind cave fish	Cons Education				x		x			96	0	0	0	3	0	93	
<i>Puntius cumingii</i>	Cumming's barb	None							x	LR/CD	10	0	0	0	4	0	6	
<i>Puntius denisonii</i>	Denison's barb	Gen Research				x			x		86	0	0	0	1	0	85	
<i>Puntius nigrofasciatus</i>	Black ruby barb	Cons Education				x				NT	19	0	26	0	5	0	40	
<i>Puntius titteya</i>	Cherry Barb	None							x	LR/CD	40	0	8	0	3	0	45	
<i>Probarbus jullieni</i>	Seven striped barb	Gen Education						x		EN	6	0	0	0	0	0	6	
<i>Trigonostigma heteromorpha</i>	Harlequin rasbora	None							x		10	48	0	0	40	0	18	

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Scientific name	Common Name	Primary Role	Species Roles							IUCN status	Stock 31/12/2008	Received	Born/hatched	DNS (30 days)	Deaths	Disposals	Stock 31/12/2009	Managed Programme
			1. Conservation			2	3	No Current Role										
			Ark	Rescue	Insurance	In situ Support	Conservation Education		Cons Res and Cons Training	General Education	General Research							
Chaetodontidae																		
<i>Chelmon rostratus</i>	Copperband butterfly fish	Gen Education							x			3	0	0	0	1	0	2
Monacanthidae																		
<i>Acreichthys tomentosus</i>	Bristletail filefish	Gen Education							x			4	0	0	0	4	0	0
Pomacanthidae																		
<i>Pomacanthus semicirculatus</i>	Koran angelfish	Phase out							x			1	0	0	0	0	0	1
Pomacentridae																		
<i>Amphiprion akallopisos</i>	Skunk clown fish	Gen Education							x			1	0	0	0	0	0	1
<i>Amphiprion frenatus</i>	Tomato clown fish	Gen Education							x			1	0	0	0	0	0	1
<i>Amphiprion ocellaris</i>	Common clown fish	Gen Education							x			20	0	0	0	0	0	20
Pseudochromidae																		
<i>Pseudochromis fridmani</i>	Orchid dottyback	Gen Education							x			3	0	0	0	0	0	3
Scatophagidae																		
<i>Scatophagus argus</i>	Red tiger scat	Gen Education							x			3	0	0	0	0	0	3
Scorpaenidae																		
<i>Dendrochirus biocellatus</i>	Fumanchu lionfish	Gen Education							x			3	0	0	0	1	0	2
<i>Pterois radiata</i>	White-fin lionfish	Gen Education							x			3	0	0	0	1	0	2
Syngnathidae																		
<i>Hippocampus kuda 'Chesteri'</i>	Seahorse	None									x	194	0	2885	2819	132	75	53
<i>Hippocampus capensis</i>	Knysna seahorse	Phase out									x	24	0	0	0	9	0	15
<i>Hippocampus reidi</i>	Longsnout seahorse	Cons Education				x			x			31	0	34	34	6	0	25
Toxotidae																		
<i>Toxotes jaculator</i>	Archer fish	Gen Education							x			4	0	0	0	0	0	4
Monodactylidae																		
<i>Monodactylus sebae</i>	Finger Fish											4	0	0	0	0	4	0

Invertebrate Stocklist page 1

Scientific name	Common Name	Primary Role	Species Roles							IUCN status	Stock 31/12/2008	Stock 31/12/2009	Managed Programme
			Ark	Rescue	Insurance	In situ Support	Conservation Education	Cons Res and Cons Training	2 General Education				
Terrestrial													
Arthropoda													
Crustacea													
Decapoda													
<i>Coenobita clypeatus</i>	Land Hermit Crab	Gen Education							x		5	4	
Arachnida													
Araneae													
<i>Brachypelma smithii</i>	Mexican Red-knee Tarantula	Gen Education							x	NT	1	1	
Scorpionidea													
<i>Pandinus imperator</i>	Emperor Scorpion	Gen Education							x		4	2	
Insecta													
Coleoptera													
<i>Chalcosoma atlas</i>	Atlas Beetle	Gen Education							x		6	1	
<i>Pachnoda</i> sp.	Fruit Beetle	Gen Education							x		50+	150	
<i>Smaragdesthes africana oertzeni</i>	African Flower Beetle	Gen Education							x		10	100	
Dictyoptera													
<i>Blaberus</i> spp.	South American Giant Cockroach	Gen Education							x		0	100+	
<i>Gromphadorhina portentosa</i>	Madagascan Hissing Cockroach	Gen Education							x		300+	38	
Hymenoptera													
<i>Atta cephalotes</i>	Leafcutter Ant	Gen Education							x		colony	colony	
Lepidoptera													
<i>Various</i>		Gen Education				x			x		362	143	
Mantodea													
<i>Pseudempusa pinnapavonis</i>	Peacock Mantis	Gen Education							x		0	50	
Phasmida													
<i>Aretaon asperimus</i>	Sabah Thorny Stick Insect	Gen Education							x		50	50	
<i>Heteropteryx dilatata</i>	Malaysian Jungle Nymph	Gen Education							x		0	21	
<i>Peruphasma schultei</i>	Peruvian Stick Insect	Gen Education							x		29	53	
<i>Phyllium</i> sp.	Leaf Insect	Gen Education							x		42	2	
<i>Pharmacea jianfengligensis</i>	Giant Walking Stick	Gen Education							x		0	2	
Orthoptera													
<i>Stilpnochlora coulouiana</i>	Giant Katydid	Gen Education							x		0	30	
Mollusca													
Gastropoda													
<i>Achatina fulica</i>	African Land Snail	Gen Education							x		14	12	
<i>Partula hyalina</i>	Partula Snail	Cons Rescue		x						CR	158	88	EEP
<i>Partula mirabilis</i>	Partula Snail	Cons Ark	x							EW	310	197	EEP
<i>Partula varia</i>	Partula Snail	Cons Rescue		x						CR	223	335	EEP

Invertebrate Stocklist page 2

Scientific name	Common Name	Primary Role	Species Roles							IUCN status	Stock 31/12/2008	Stock 31/12/2009	Managed Programme																		
			Ark	Rescue	Insurance	In situ Support	Conservation Education	Cons Res and Cons Training	2 General Education					3 General Research	No Current Role																
Marine																															
Mollusca																															
Gastropoda																															
<i>Fusinus polygonoides</i>	Conch	Phase out									x	1	1																		
Echinodermata																															
Echinoidea																															
<i>Diadema antillarum</i>	Long-spined Urchin	Gen Education										x	8	7																	
<i>Eucidaris tribuloides</i>	Slate Pencil Urchin	Gen Education											x	1	1																
Ophiuroidea																															
<i>Ophiarachna incrassata</i>	Green Brittle Star	Gen Education												x	19	20															
Cnidaria																															
Anthozoa																															
<i>Actinodiscus</i> sp.	Mushroom Anemone	Gen Education													x	50	60														
<i>Parazoanthus</i> sp.	Yellow Encrusting Anemone	Gen Education														x	100+	150													
<i>Palythoa</i> sp.	Encrusting Anemone	Gen Education															x	100+	150												
<i>Phymanthus crucifer</i>	Sand Anemone	Phase out																x	0	0											
<i>Heteractis</i> sp.	Sea Anemone	Gen Education																	x	50+	60										
<i>Acanthophyllia deshayensiana</i>	Beaker Coral	Phase out																		x	2	0									
<i>Euplexaura</i> sp.	Gorgonian	Gen Education																			x	6	6								
<i>Lobophytum crassum</i>	Mouse Ear Coral	Phase out																				x	0	0							
<i>Plerogyra sinuosa</i>	Bubble Coral	Gen Education																					x	3	4						
<i>Sinularia</i> sp.	Soft Coral	Gen Education																						x	100+	80					
<i>Tubastrea</i> sp.	Sun Coral	Gen Education																							x	3	3				
<i>Turbinaria mesenterina</i>	Bowl Coral	Gen Education																								x	1	1			
<i>Turbinaria pelata</i>	Bowl Coral	Gen Education																									x	1	1		
<i>Sarcophyton trocheliophorum</i>	Leather Coral	Gen Education																										x	1	1	

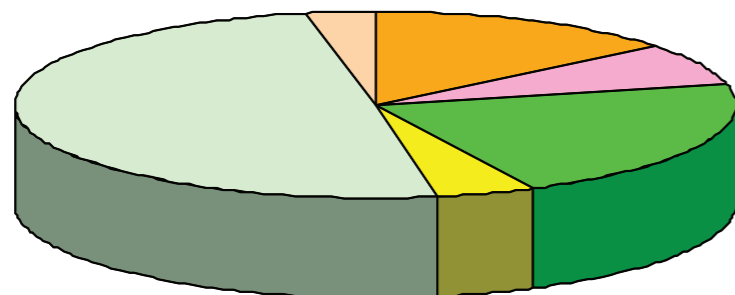
Plant Stocklist page 1

Scientific name	Common Name	Primary Role	Species Roles								IUCN status
			1. conservation					2	3	No Current Role	
			Ark	Rescue	Insurance	In situ Support	Conservation Education	Cons Res and Cons Training	General Education		
Gymnosperms											
<i>Araucaria araucana</i>	Monkey Puzzle	Gen Education							x		CR
<i>Araucaria heterophylla</i>	Norfolk Island Pine	Gen Education							x		VU
<i>Chamaecyparis lawsoniana</i>	Lawson's Cypress	Gen Education							x		EN
<i>Dioon spinulosum</i>		Gen Education							x		VU
<i>Ginkgo biloba</i>	Maidenhair Tree	Gen Education							x		EN
<i>Metasequoia glyptostroboides</i>	Dawn Redwood	Gen Education							x		CR
<i>Picea omorika</i>		Gen Education							x		VU
<i>Podocarpus nubigenus</i>		Gen Education							x		LR/NT
<i>Podocarpus salignus</i>	Willowleaf Podocarp	Gen Education							x		VU
<i>Pseudolarix amabilis</i>	Golden Larch	Gen Education							x		DD
<i>Sequoiadendron giganteum</i>	Giant Redwood	Gen Education							x		VU
<i>Zamia fischeri</i>		Gen Education							x		EN
<i>Zamia furfuracea</i>	Cardboard Palm	Gen Education							x		VU
Dicotyledons											
<i>Aeonium balsamiferum</i>		Gen Education							x		VU
<i>Aeonium castellopaivae</i>		Gen Education							x		EN
<i>Aeonium cuneatum</i>		Gen Education							x		VU
<i>Aeonium goochiae</i>		Gen Education							x		EN
<i>Aeonium haworthii</i>		Gen Education							x		EN
<i>Aeonium rubrolineatum</i>		Gen Education							x		VU
<i>Aporocactus flagelliformis</i>		Gen Education							x		VU
<i>Ariocarpus agavoides</i>		Gen Education							x		VU
<i>Ariocarpus bravoanus</i>		Gen Education							x		VU
<i>Ariocarpus fissuratus</i>		Gen Education							x		VU
<i>Ariocarpus retusus ssp. trigonus</i>		Gen Education							x		VU
<i>Ariocarpus scaphirostris</i>		Gen Education							x		VU
<i>Astrophytum ornatum</i>		Gen Education							x		DD
<i>Aztekium ritteri</i>		Gen Education							x		VU
<i>Baldellia ranunculoides</i>	Lesser Water-plantain	Cons Insurance			x		x				NT
<i>Berberiodopsis corallina</i>		Gen Education							x		EN
<i>Betula chichibuensis</i>		Gen Education							x		EN
<i>Brachyglottis compacta</i>		Gen Education							x		EN
<i>Carmichaelia curta</i>		Gen Education							x		EN
<i>Carmichaelia kirkii</i>		Gen Education							x		EN
<i>Cephalocereus senilis</i>		Gen Education							x		VU
<i>Cephalocereus follicularis</i>		Gen Education							x		VU
<i>Chordospartium muritai</i>	Weeping Tree Broom	Gen Education							x		EN
<i>Chordospartium stevensonii</i>	Weeping Tree Broom	Gen Education							x		VU
<i>Clianthus puniceus</i>	Glory Pea	Gen Education							x		EN
<i>Conophytum ernestii ssp. ernestii</i>		Gen Education							x		EN
<i>Copiapoa cinerea ssp. cinerea</i>		Cons Insurance			x					x	VU
<i>Copiapoa echinoides</i>		Cons Insurance			x					x	NT
<i>Copiapoa esmeraldana</i>		Cons Insurance			x					x	EN
<i>Copiapoa fielderiana</i>		Cons Insurance			x					x	VU
<i>Copiapoa grandiflora</i>		Cons Insurance			x					x	VU
<i>Copiapoa humilis ssp. tecopillana</i>		Cons Insurance			x					x	EN
<i>Copiapoa humilis ssp. tenuissima</i>		Cons Insurance			x					x	EN
<i>Copiapoa humilis ssp. varispinata</i>		Cons Insurance			x					x	DD
<i>Copiapoa hypogaea ssp. hypogaea</i>		Cons Insurance			x					x	EN
<i>Copiapoa hypogaea ssp. laui</i>		Cons Insurance			x					x	VU

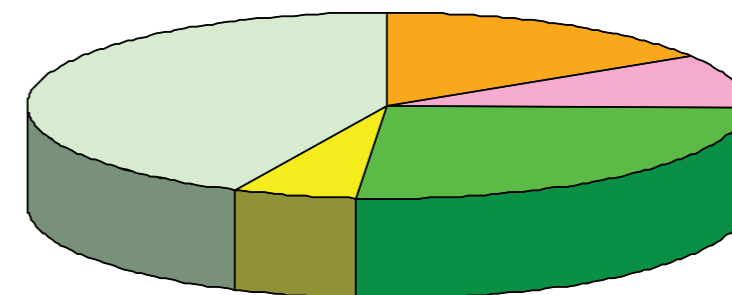
Scientific name	Common Name	Primary Role	Species Roles								IUCN status	
			1. conservation					2	3	No Current Role		
			Ark	Rescue	Insurance	In situ Support	Conservation Education	Cons Res and Cons Training	General Education			General Research
<i>Copiapoa krainziana</i>		Cons Insurance			x					x		VU
<i>Copiapoa longistaminea</i>		Cons Insurance			x					x		VU
<i>Copiapoa marginata</i>		Cons Insurance			x					x		VU
<i>Copiapoa megarhiza ssp. echinata</i>		Cons Insurance			x					x		NT
<i>Copiapoa megarhiza ssp. megarhiza</i>		Cons Insurance			x					x		EN
<i>Copiapoa montana</i>		Cons Insurance			x					x		DD
<i>Copiapoa serpentisulcata</i>		Cons Insurance			x					x		EN
<i>Copiapoa solaris</i>		Cons Insurance			x					x		EN
<i>Copiapoa taltalensis ssp. desertorum</i>		Cons Insurance			x					x		NT
<i>Copiapoa taltalensis ssp. taltalensis</i>		Cons Insurance			x					x		NT
<i>Corokia macrocarpa</i>		Gen Education								x		DD
<i>Coryphantha elephantidens</i>		Gen Education								x		VU
<i>Coryphantha longicornis</i>		Gen Education								x		NT
<i>Cosmos atrosanguineus</i>		Cons Ark	x							x		EW
<i>Cotoneaster cambricus</i>	Wild Cotoneaster	Cons Insurance			x					x		CR
<i>Crassula rupestris ssp. marnierana</i>		Gen Education								x		EN
<i>Crassula socialis</i>		Gen Education								x		VU
<i>Crinodendron hookerianum</i>	Chile Lantern Tree	Gen Education								x		VU
<i>Davidia involucreta var. involucreta</i>	Hankerchief Tree	Gen Education								x		EN
<i>Dicentra spectabilis</i>	Bleeding Hearts	Gen Education								x		DD
<i>Dionaea muscipula</i>	Venus Fly Trap	Gen Education								x		VU
<i>Drosera adalae</i>	Sundew	Gen Education								x		VU
<i>Drosera regia</i>	Sundew	Gen Education								x		VU
<i>Drosera rotundifolia</i>	Sundew	Gen Education								x		EN
<i>Echeveria laui</i>		Gen Education								x		DD
<i>Echinocactus grusonii</i>	Golden Barrel	Gen Education								x		CR
<i>Echium pininana</i>		Gen Education								x		VU
<i>Echium wilpretii</i>		Gen Education								x		VU
<i>Eriogonum cinereum</i>		Gen Education								x		VU
<i>Escobaria chaffeyi</i>		Gen Education								x		VU
<i>Euphorbia mellifera</i>		Gen Education								x		VU
<i>Ferocactus santamaria</i>		Gen Education								x		EN
<i>Hebe armstrongii</i>		Gen Education								x		VU
<i>Hebe cupressoides</i>		Gen Education								x		VU
<i>Ilex perado ssp. platyphylla</i>		Gen Education								x		EN
<i>Kalanchoe faustii</i>		Gen Education								x		VU
<i>Lithops aucampiae</i>	Living Stone	Gen Education								x		VU
<i>Lithops bromfieldii</i>	Living Stone	Gen Education								x		DD
<i>Lithops comptonii</i>	Living Stone	Gen Education								x		EN
<i>Lithops geyeri</i>	Living Stone	Gen Education								x		VU
<i>Lithops gracilidelineata</i>	Living Stone	Gen Education								x		VU
<i>Lithops lesliei ssp. burchellii</i>	Living Stone	Gen Education								x		VU
<i>Lithops schwantesii</i>	Living Stone	Gen Education								x		VU
<i>Lyonothamnus floribundus ssp. asplenifolius</i>	Santa Cruz Island Ironwood	Gen Education								x		VU
<i>Mammillaria angelensis</i>		Gen Education								x		VU
<i>Mammillaria backbergiana var. ernestii</i>		Gen Education								x		VU
<i>Mammillaria bocasana</i>		Gen Education								x		VU
<i>Mammillaria bocensis</i>		Gen Education								x		VU
<i>Mammillaria bombycina</i>		Gen Education								x		VU
<i>Mammillaria bullardiana</i>		Gen Education								x		VU
<i>Mammillaria cerralboa</i>		Gen Education								x		VU

Summary of ALL Roles by Percentage page 1

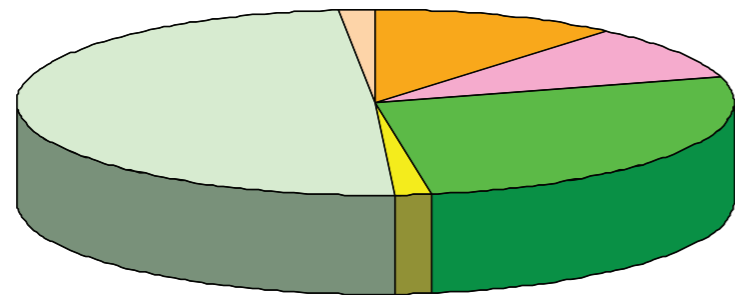
Summary of All Roles Fulfilled by **Animal Species** at Chester Zoo in 2009



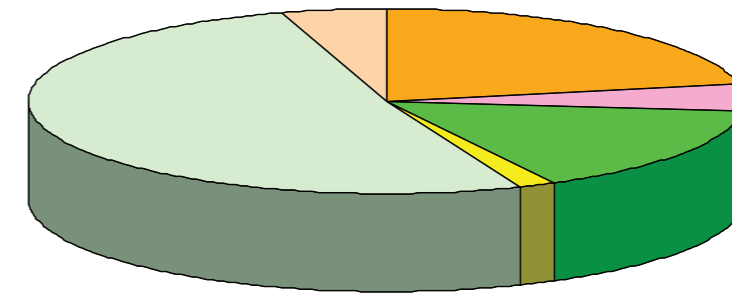
Summary of All Roles Fulfilled by **Bird Species** at Chester Zoo in 2009



Summary of All Roles Fulfilled by **Mammal Species** at Chester Zoo in 2009

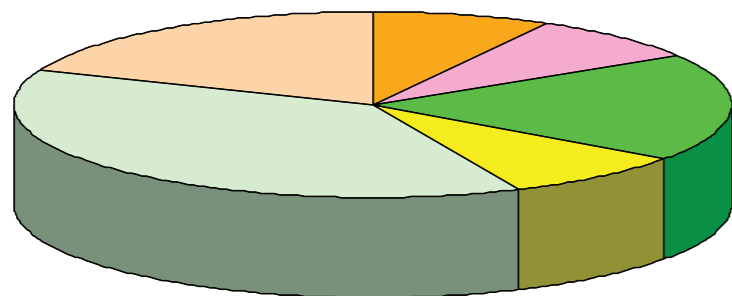


Summary of All Roles Fulfilled by **Reptile Species** at Chester Zoo in 2009

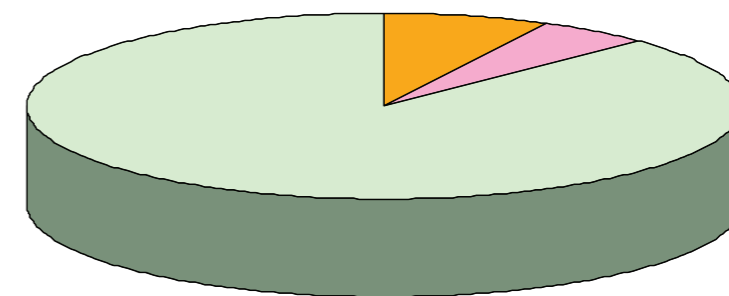


Summary of ALL Roles by Percentage page 2

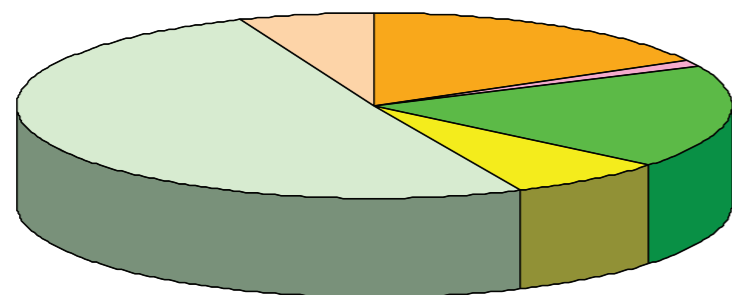
Summary of *All* Roles Fulfilled by **Amphibian Species** at Chester Zoo in 2009



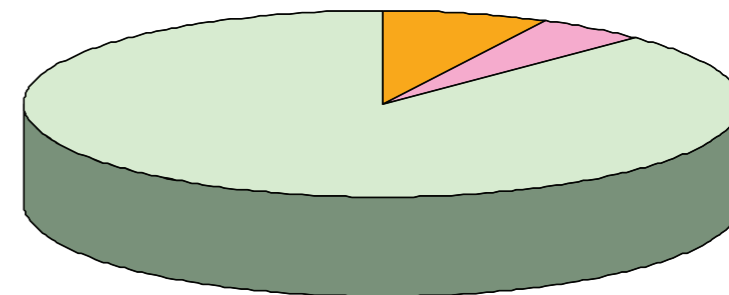
Summary of *All* Roles Fulfilled by **Plant Species** at Chester Zoo in 2009



Summary of *All* Roles Fulfilled by **Fish Species** at Chester Zoo in 2009



Summary of *All* Roles Fulfilled by **Invertebrate Species** at Chester Zoo in 2009



Summary of Conservation Status of Collection

Animal Stock

As of 31st December, 2009

	Number of Species End '08	Number of Species End '09	Number of Specimens End '08	Number of Specimens End '09
Mammals	75	78	1174	1243
Birds	152	144	1108	1053
Reptiles	49	48	200	228
Amphibians	26	23	631	618
Fishes	79	77	2960	2809
Invertebrates	52	36	1934	1824
TOTAL	433	406	8007+	7775+

ISIS Animal Data Quality Management Figures

Data Quality 26/04/2010

International Species Information System (ISIS)	Chester Zoo	International Average
Transaction Link Rate	Linked 99%	ISIS Avg. 86%
Validated Parent Rate	Validated 99%	ISIS Avg. 96%
Data Reconciled with Worldwide Studbooks	Reconciled 94%	ISIS Avg. 80%
Studbooks Reconciled with ISIS Global Database	Reconciled 86%	ISIS Avg. 80%

Chester Zoo performed at a level substantially above the average for other members of the International Species Information System (ISIS)

Animal Summary

As of 31st December, 2009

	IUCN Red List	Managed Programmes	Total IUCN &/or Managed Programmes
Mammals	77	52	77
Birds	67	46	73
Reptiles	23	22	27
Amphibians	23	2	23
Fishes	32	0	32
Invertebrates	4	4	4
Total in Zoo	226	126	236

Numbers of Animal Species on the IUCN Red List of Threatened Species

As of 31st December, 2009

	Number of Animals
Extinct in the Wild - EW	5
Critically Endangered - CR	48
Endangered - EN	38
Vulnerable - VU	52
Near Threatened - NT	27
Least Concern - LC	48
Data Deficient - DD	8
Total in Zoo	226

Numbers of Plant Species on the IUCN Red List of Threatened Species

As of 31st December, 2009

	Number of Plants
Extinct in the Wild - EW	4
Critically Endangered - CR	23
Endangered - EN	54
Vulnerable - VU	150
Near Threatened - NT	10
Least Concern - LC	3
Data Deficient - DD	20
Total in Zoo	264

Total numbers of Species and Threatened Species

As of 31st December, 2009

	Number of Species in Zoo	Number of Threatened Species in Zoo
Animals	406	143
Plants	264	231
Total in Zoo	670	374

CITIES Summary for Animals

As of 1st January, 2009

Convention on International Trade in Endangered Species (CITES)	Appendix I	Appendix II	Total
Mammals	30	14	44
Birds	27	51	78
Reptiles	10	25	35
Amphibians	0	13	13
Fishes	2	4	6
Invertebrates	0	5	5
Total in Zoo	69	112	181