



2017 ZOO REVIEW

Annual Review of the North of England Zoological Society

www.chesterzoo.org



Chairman: Bruce Ursell

CHAIRMAN'S STATEMENT



2017 saw the continued improvement of Chester Zoo's performance. This is a tribute to the people working here in Chester, in our outreach teams inspiring the young people in our area, and at our various projects worldwide, not only our full time staff but also our dedicated group of volunteers.

This past year has seen the publication of our Strategic Development Plan, designed to ensure that the zoo develops its ability to fulfill its charitable objectives whilst continuing to attract and stimulate our visitors, the revenue from whom funds all that we do. In that respect we are different from a lot of the major zoos outside the UK, which are funded by their governments. That makes our achievements in terms of recognition through independent rankings particularly pleasing. The development plan will enable us to grow further in a cohesive manner to ensure that we improve our visitor experience, protect more species and focus upon our conservation priorities, all of which will result in more of the changes to our layout that at times requires diverting routes. As with the new Madagascar area and penguin habitat, and the renovated Oakfield, I am confident that any short term disruption will be worth it in the longer term.

We have benefitted from the publicity gained from the TV series "The

Secret Life of the Zoo" which will continue later in 2018 and into 2019. The series shows Chester Zoo in a fine light. That helps not only us but the image of zoos generally. This is important given some of the adverse publicity zoos sadly sometimes attract. There are always critics ready to seize on isolated incidents to castigate zoos as a whole without recognising the vitally important conservation, education and scientific work that goes on, often unseen. Social media provides a fertile outlet for entities and individuals with an agenda that is often badly informed.

In the past we have tended to respond only to specific criticisms but as part of our mission we do feel that zoos have a vital role in the conservation effort so this year we have adjusted our strategic objectives to become a more pro-active voice for change. We have an important voice in British, European and worldwide zoo associations and intend to harness that and any other influence we can bring to bear to provide a counter to those entities that seek to damage us and divert us from our conservation and education aims. As an example, our efforts to turn Chester into the first Sustainable Palm Oil City is a local initiative to change behaviour and minds, plus hopefully, letting others see the nature of one of our non-zoo related efforts.

Our charitable mission is difficult given the pressures upon habitats leading to human wildlife conflict but I am confident that our team is up for the task.

OUR TRUSTEES



Bruce Ursell, Chair

Bruce has held a number of directorships including a FTSE100 company and has chaired a top ten accounting firm. For 12 years he was a non-executive director of Standard Bank plc, during which time he was chairman of companies managing European government and private investments in emerging markets.



Prof Malcolm Bennett

As Professor of Zoonotic and Emerging Disease, Faculty of Medicine and Health Sciences at the University of Nottingham, Malcolm provides advice to veterinary pharmaceutical companies and advises government agencies on infectious diseases and their risk consequences.



Penny Coates

Former Managing Director of the Manchester Airports Group, Director of Asda and Non Executive Director of the Cooperative Society Specialist Businesses, Penny has held senior roles in retail, aviation, manufacturing and financial services. Penny is now semi-retired to allow her to focus on Non-Executive Director and Trustee roles.



Prof Richard Griffiths

Richard is based at the Durrell Institute of Conservation and Ecology (DICE) at the University of Kent. An advocate of the powerful role that zoos can play in conservation, education and applied research, he is a member of the IUCN Reintroductions Specialist Group, and has chaired several working groups on translocation and reintroduction themes.



Malcolm Ardron, Vice Chair (Mission Enabling)

Malcolm is a company managing director and Fellow of the Institution of Mechanical Engineers. After studying Engineering Science at Oxford University his career spanned both public and private sectors. He is currently Managing Director of a company providing engineering and construction services.



Catherine Buckley

Catherine is a retired Headmistress of The Queen's School, Chester. After studying modern languages at Oxford, she spent two years teaching in Southern Germany. She has taught for most of her career at leading independent schools in the North West.



Sandra Donnelly

Sandra is Head of Economics at William Hulme's Grammar School in Manchester. She previously served as the Chief Executive of the Economics, Business and Enterprise Association, where she was responsible for building relationships with a range of stakeholders including government bodies, academics and education professionals and has co-ordinated partnerships with schools in South Africa, China and Australia.



Angela Pinnington

Angela is an independent business consultant experienced in the design and delivery of strategy, project management, business improvement and people development projects. She specialises in the provision of coaching and training. For several years now she has been a trustee of Ariel Trust, an education charity established in 1982.



William Beale, Vice Chair (Mission Delivery)

Will is Head of Programme Operations, WWF-UK. After working for 10 years with Unilever as a Chartered Chemical Engineer in various innovation, development and manufacturing roles, Will joined World Wildlife Fund (WWF-UK) in 2003. His work focuses on developing the organisation, its processes and people, to achieve increased impact and value for money from conservation programmes.



Edwin Christmas

Edwin is a property consultant and Fellow of the Royal Institution of Chartered Surveyors practicing in the commercial and rural property sectors. Formerly the Estate Director at Eaton Estate, Chester and Agent to the 6th Duke of Westminster, he was responsible for the stewardship and management of this 4000-hectare diverse estate.



Prof Russell Newton

Russell was Professor of Biochemistry at Swansea University until retirement in 2008, when he was elected Emeritus Professor. He was also Lead Director of the Biomolecular Analysis Mass Spectrometry Facility. He is currently Chair of the Scientific Advisory Board of Endocrine Pharmaceuticals.



Simon Venables

Simon has worked as Assistant Finance Director and Head of Internal Audit at Bibby Line Group in Liverpool, with previous experience as Audit Senior Manager at KPMG. A Chartered Accountant, he spent 13 years with KPMG in Liverpool after graduating from Cambridge University (Geography) in 2000.



Paula Spence

Paula has been a member of Chester Zoo for over 10 years and regularly visits with her family. A graduate of Liverpool University, she has worked in Health and Social Care for over 15 years, currently holding a senior post for a large charity. Paula also owns her business in the village where she lives.



Dr Mark Pilgrim

CHIEF EXECUTIVE'S REVIEW

As the scale of damage that we humans are inflicting on our beautiful planet and its wondrous variety of biodiversity escalates, NEZS, Chester Zoo must refocus its efforts to play an expanding role in the fight to conserve animals and plants. While no single organisation can address all the issues facing our planet alone, we must ensure that everyone involved with this organisation is united in channelling their skills and passion towards a clear mission. During 2017 we drew up our 5 year strategic plan and from this developed a new more focussed Mission Statement; 'Preventing Extinction', that was launched on the 1st January 2018. This simple statement of what we exist for, means that everyone in the organisation, whether enabling or delivering our mission can use it as a sense check of everything that we do.

Throughout the pages of this annual review you will find many examples of breeding successes; Bornean orangutan, Asian elephant, spectacled bear and some of these such as Bermuda skinks, Montsemy brook newts and Javan green magpies are the first time these species have been bred under human care outside of their range countries. Others may not be first ever breedings, however are just as important as they make a vital contribution to intensively managed European Breeding Programmes. Two Eastern black rhino were born at the zoo in the space of just one, very special week and a real boost for the European-wide breeding programme which is coordinated from Chester Zoo.

Breeding species that are on the very brink of extinction like these gives an immediate boost to these populations. It is also vitally important that we look to the future, to inspiring new generations

of conservationists and citizens who make informed choices about safeguarding their world. With that in mind we offered free school visits at the end of 2017. With much appreciated support from the Trustees, free school visits began in November with 500 students receiving free entry to the zoo each day. Very positive feedback has been received from schools taking advantage of the free entry. Many schools taking up the offer are visiting the zoo for the first time or have not visited for some years, due to monetary constraints of both the schools and pupils' families.

I was delighted that during 2017 we were able to complete the three new exhibits that were postponed from the original Islands project. The new habitats for Malayan Tapir, sun bear and a walkthrough Sumatran forest aviary, have added an extra dimension to Islands. Watching the sun bears exploring their new, beautifully landscaped natural habitat was a real high point for me in the summer.

All of these activities to further our mission rely on us being able to generate income, not only to keep the zoo in top condition but also to invest in our development plans and fund our conservation activities in the field. Ensuring that we provide a great experience for our much appreciated visitors and supporters continues to be at the heart of our day to day work.

It remains an immense privilege to be the CEO of Chester Zoo and to lead this incredible organisation. Each year not only do I witness amazing miracles of nature but I'm also constantly inspired by the skills, dedication and passion of our staff from all of the diverse areas of Chester Zoo.



Jamie Christon

CHIEF OPERATING OFFICER'S REVIEW

Despite the successes of the previous few years, 2017 heralded the start of change within the zoo. Our founder, George Mottershead believed that he should be 'always building' and to maintain our reputation as being one of the best zoos in the world, Chester must continue to change and evolve.

Early in the year, we began some careful and considered consultation around a draft Strategic Development Plan which set out a realistic vision of our intent around physical change to the zoo layout and storyline over the next fifteen years. We spent time meeting with a wide range of stakeholders including members and local residents as well as various agencies that had interest in our future.

Alongside this period of consultation, we were in fact already setting out the first phases of the plan with work well underway at the start of the year on Islands, creating new habitats for a number of species, Oakfield House and the transformation of space in the heart of the zoo as the centre for our theme of Play! All of these projects were time critical with each of these areas being iconic zones of the zoo that we wanted to open to our members and visitors as soon as we were able.

The transformation of Madagascar Play! turned out to be a huge success and has already established itself as a hub for families enjoying the varied themed areas.

Enabling works within Oakfield House resulted in the first phase of refurbishment to be completed in time for us to reopen the original home of the zoo for a number of events across the summer and into the autumn.

Additional habitats for sun Bear, Malayan tapir and a fantastic walk through bird aviary was ready for the summer holidays and based on learning from the Islands projects allowed us to show these species in a new way for the first time as well as highlighting illegal wildlife trade through interpretation.

We were absolutely thrilled to be named the 3rd best zoo in the world by Trip Advisor and again the most popular visitor attraction outside London by The Association of Leading Visitor attractions.

Continued focus on development of our people through initiatives such as World Host® training and an in house leadership programme helped maintain our reputation and this led to further regional, national and international awards.

Part of change includes ensuring Chester Zoo is a year round attraction and during the autumn we promoted 'The Enchantment of Chester Zoo' to our visitors and again in December 'Lanterns' attracted many to come and explore the zoo at night. Work is already underway to make sure this major event is better than ever before for 2018.

Swept up throughout the year was the staggering continual popularity of Channel 4s 'The Secret Life of the Zoo' which has now started filming a further series.

As our Chairman mentioned, one of our Strategic Objectives is around being a 'Voice for Change' and this will develop both in the physical changes within the zoo but also our growing need to shout louder and more strongly about conservation both here in the UK and globally.

Our Mission: Preventing Extinction

STRATEGIC DEVELOPMENT PLAN

Our strategic objectives continue to inform and guide our teams in planning, achieving and developing our mission and supporting business activities.

At the end of 2017 we reviewed the objectives in line with progress and our new mission, "preventing extinction", ensuring they reflect our vision for the next fifteen years which is articulated in our Strategic Development Plan (SDP).

Our Strategic Objectives:

- Strategic objective 1**

Preventing Extinction - by achieving the greatest conservation impact.
- Strategic objective 2**

Preventing Extinction - by being a world class visitor attraction.
- Strategic objective 3**

Preventing Extinction - by providing exceptional animal and plant care.
- Strategic objective 4**

Preventing Extinction - by ensuring financial sustainability.
- Strategic objective 5**

Preventing Extinction - by developing our people to be the best.
- Strategic objective 6**

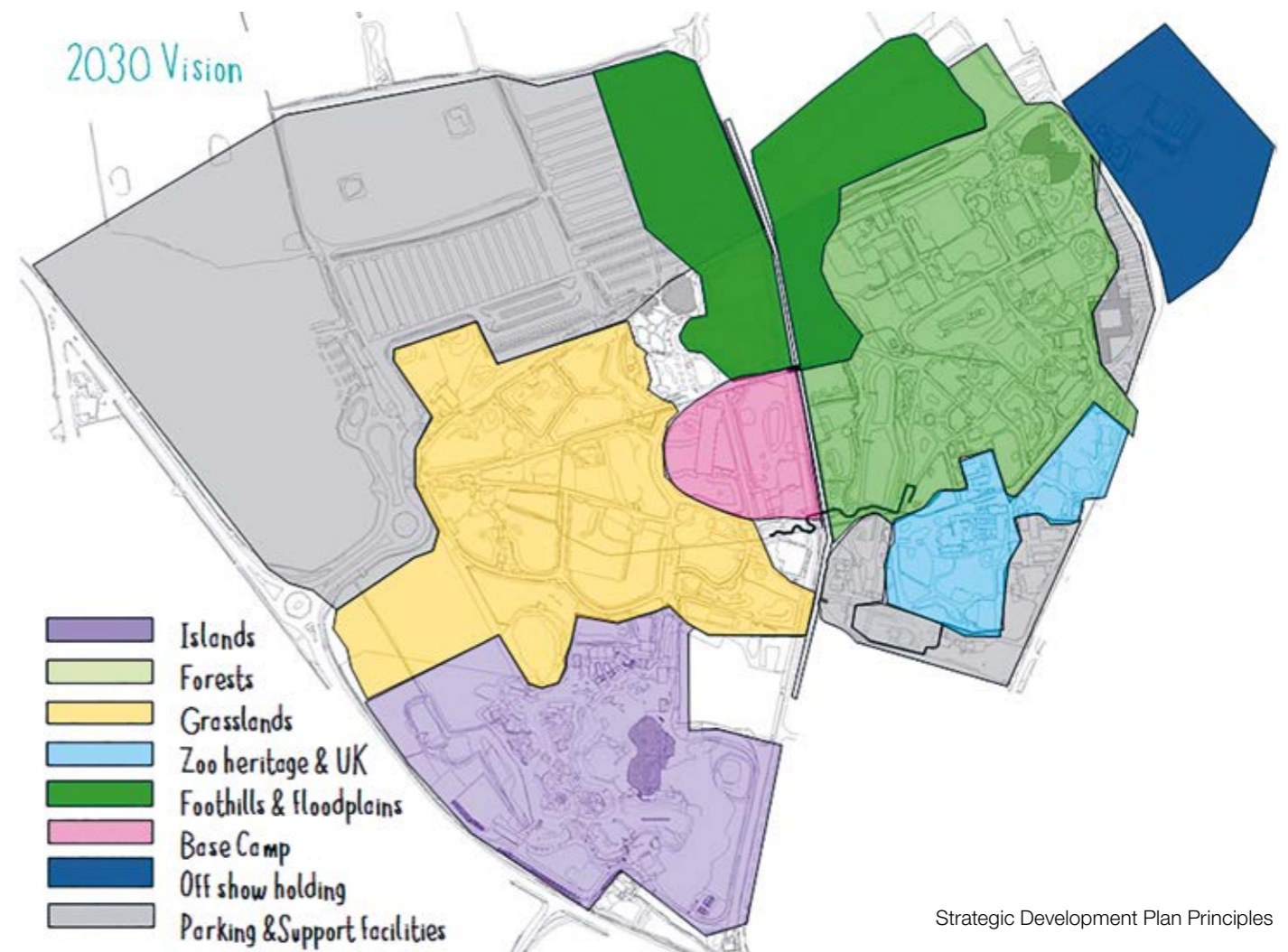
Preventing Extinction - by being a voice for change.



Strategic Development Plan (SDP)

The SDP sets out our plans for the physical development of the zoo, reflecting our work in the world's biodiversity hotspots, as described in the following pages. It also builds on our proud heritage and current achievements to ensure that the physical site of the zoo is focused on the zoo achieving its mission.

The plan improves infrastructure to meet the changing needs of the zoo and all of its stakeholders, including the visitors, staff, trustees and of course its animals, while keeping the zoo's unique character and values. It sets out the development of new zones: Grasslands, Forests, Foothills and Floodplains, to accompany Islands, and promises to create exciting and engaging experiences for our visitors, seeing existing species alongside those coming in to the collection, in world class habitats.





OUR PEOPLE

During 2017, we saw record numbers of job applications and invested in new applicant tracking software. Managers can access job applications on-line without the need to print, criteria is easily assessed and there is a clear audit trail of activity.

At our busiest we had a permanent headcount of 420 along with 407 seasonal and 32 fixed term staff taking our total to 859. 29 new roles were created in order to meet development needs to support the Strategic Development Plan.

Training and Development

We may be a leading zoo but what is even harder than being number one is to stay number one. We get fantastic customer reviews and we want to ensure they keep coming in. Several customer service training providers were assessed and WorldHost® was selected as providing the best all round training with an international track record and closer to home the credit of training the Olympic 2012 'Gamemakers'.

We trained 720 staff in either the Ambassador or Principles of Customer Service module. Staff have really engaged with the training and managers feel there is firm foundation to build on. Plans are already in place to roll out "Customers with Disabilities" and "Service across Cultures" modules. We're also going to refresh seasonal returners this year with an on-line module.

WorldHost was but part of a bigger training picture as in total we delivered an amazing 1,393 training activities covering 45 different types of training ranging from short 30 minute training "Zaps!" to week-long chainsaw and rope skills.

Recognition

Our on-line performance development review (PDR) was enhanced to provide more opportunity to discuss aspirations. We also now have an on-line method to confirm training has been authorised and booked.

WorldHost® were amazed at the numbers we trained in the time and we very pleased to be awarded a recognition award to celebrate Chester Zoo as an organisation delivering exceptional levels of customer service.

Health, Wealth & Happiness

Our health, wealth & happiness programme really picked up the pace this year with a selection of events ranging from cooking classes led by our Executive Head Chef, to photography masterclasses with a

freelance photographer. Our horticulture and botany team delivered top tips for gardeners, which proved extremely popular.

Additional opportunities for staff, under the 'health' banner, included benefits offered by local gyms, and team collaboration in our 'Move for Movember' campaign. Zap sessions were delivered on the theme of Psychological Wellbeing; and the Wealth element was delivered through pension themed zap sessions.

Feedback on all of the above initiatives has been excellent, so we'll build on this in 2018.

Volunteers

2017 saw the visitor engagement volunteer programme go from strength to strength. At the start of the year we recruited and trained 77 new visitor engagement volunteers, taking our total volunteer pool to well over 200. To facilitate this expansion and ensure we continue to provide a high level of quality support to our volunteers.

Having an increased number of trained visitor engagement volunteers on board enabled us to interact with more visitors than ever before, with 261,023 interactions recorded by volunteers during the year. These interactions range from providing a friendly welcome to Islands to engaging visitors with our Sustainable Palm Oil Challenge or helping them find facilities or their favourite animals. New visitor engagement volunteer roles were introduced in the Aquarium, in Monsoon Forest and in the new Sumatran aviary and sun bear area.

Our volunteers undoubtedly provide great benefits to visitors and increase our capacity to engage with people. Between them they donated 19,812 hours to the zoo over the year. However, our visitor engagement volunteer programme was always designed to also provide learning and wellbeing benefits to volunteers themselves. This year we were able to research these benefits using a questionnaire based on a framework created by the National Council for Voluntary Organisations (NVCO). And, following interest from other zoos we extended the research to volunteers at 18 other zoological collections, involving a total of 522 respondents. The volunteers who took part in the study reported positive impacts on their personal development and wellbeing, with higher impacts in areas such as self-esteem, confidence and motivation. They also reported increased social networks and benefits from meeting new people and an increased willingness to try new things. In September we released a report on our findings and circulated this to other BIAZA collections when in October we hosted the Volunteer Managers Working Group Annual Conference.



AWARDS

In 2017, we were delighted to be awarded the following accolades:

- British Coach Tourism Awards**Accessibility Award
- The High Sheriff of Cheshire's Award for Enterprise 2016/17**Chester Zoo Islands: Special Enterprising Project of the Year
- Visit England Awards for Excellence**National Winner: Family Friendly Food & Drink Business of the Year
- Institute of Directors North West** Jamie Christon: Winner, Public Sector/Third Sector Director of the Year
- Institute of Directors North West** Jamie Christon: Winner, Large Company Director of the Year
- Institute of Directors North West** Jamie Christon: Winner, Overall North West Director of the Year
- Whitley Awards** Andean bear conservation project in partnership with WildCRU/Bolivian NGO Prometa: Dr Ximena Velez-Liendo
- Whitley Awards** Philippine Cockatoo Conservation Programme Project in partnership with the Katala Foundation: Indira Lacerna-Widman
- BIAZA** Gold Award for Conservation: Orangutan Veterinary Advisory Group
- BIAZA** Gold Award for Conservation: The Philippine Cockatoo Conservation Programme
- BIAZA** Gold Award for exhibit: Monsoon Forest
- BIAZA** Gold Award for PR, marketing, digital and events: Relaunch of Act For Wildlife
- BIAZA** Gold Award for Education: Evaluating a repeat visit outreach service linked to UK native species
- BIAZA** Gold Award for Research: Ecology, physiology and behaviour in equids: Developing markers for individual status and population health
- BIAZA** Silver Award for Conservation: Reintroduction of partula tree snails into French Polynesia
- BIAZA** National Zoo Photo Awards Runner Up and Commendation: Johanna Rode-Margono for camera trap photographs
- RHS Flower Show, Tatton** Silver Gilt
- Institute of Directors (National)** Jamie Christon: Winner, Gold Award Mid-Market Category Director of the Year
- Cheshire Business Awards** Winner, Business of the Year (over 50 employees)
- BIAZA** Working Mammal Group: Grant awarded for Javan Species Recovery Programme (Hoof stock)
- North West in Bloom** Trophy for Best Large Tourist Attraction
- North West in Bloom** Gold Medal for Best Large Tourist Attraction
- North West in Bloom** Trophy for Biodiversity Award
- UK Heart Safe Awards** Leisure & Tourism Organisation of the Year



Conserving species of

LATIN AMERICA

Andean bear, Lima, with her cub, Madidi

Our Latin American programme this year has continued to involve an incredibly diverse range of species. A first for us here at the zoo (and indeed for the mainland United Kingdom) was the successful birth of an Andean bear cub right at the beginning of the year in January and by May our visitors were able to see 'Madidi' out and about in her habitat. In Bolivia our Chester Zoo Conservation Fellow has been working with various MPs and other politicians to pass a law, the 'Ajayu's' law, to protect the Andean bear and ultimately its ecosystem, they have also been deploying camera traps and recording signs of bear presence such as tree marks, food remains and scats, to gain a better understanding of distribution.

The zoo's work with the Bermudan Government has been hugely successful this year. The Bermuda skinks laid two fertile clutches of eggs which hatched successfully; the first breeding ever outside of Bermuda. The Bermuda snails that we brought to the zoo have also rewarded us with over 1,800 offspring, whilst we have also been successful in breeding the Bermudan killifish and now have over 100 healthy developing offspring. All the species are right on the edge of extinction in Bermuda and these successes pave the way for sending specimens back and future reintroduction efforts to help secure the species in their Bermudan habitats and prevent their extinction.

The zoo is pleased to have received a donation of plants to add to its National Plant Collection of *pleurothallidinae* orchids. The plants were donated by a world authority on these species and the new orchids represent approximately 100 new species to add to the existing

collection of about 700. Most of the pleurothallidinae have not yet been assessed for the IUCN Red List, but many of them are included on Regional Red Lists for their native South American countries and are highly threatened.

Our partners in Brazil have been exceedingly busy and productive in their work on lowland tapir, giant anteater and giant armadillo. In April the giant armadillo work we have supported since 2011 was featured in a BBC2 Natural World documentary entitled 'Hotel Armadillo'. As part of their research into the impact of roads on anteaters our partners also captured an adult male Giant anteater in the Brazilian Cerrado; they named him 'Chester' to honour our long term partnership. 'Chester' was equipped with a GPS harness on which reflective lights were placed in the hope that it will help him avoid any collisions with vehicles in the future, whilst giving important data on anteater movements. Also the lowland tapir work has been very productive with a total of five capture expeditions during the first half of 2017. These recent expeditions in the Cerrado helped them to exceed their goal to capture 30 tapirs in three years. Twenty-one have been equipped with GPS collars helping the team to gather precious information such as the frequency of highway crossings.

In the zoo it has been a busy time with births for our pied tamarins, Colombian black spider monkeys and Rio Cauca caecilians. We were also delighted to obtain two new blue-throated macaws which will hopefully help us to breed this critically endangered species in the future.



Rare African painted dog pups make their playful debut

Conserving species of

AFRICA

It's been a great year for our Africa regional programme with 'firsts' here in the zoo and significant progress in our field activities. Again Eastern black rhinoceros has been at the fore of our fight to prevent extinction; in June we had the momentous birth of two calves within a week of each other to mums 'Kitani' and 'Zuri' whilst at the same time a second-generation calf was born to mum 'Daisy' at our partners reserve in Mkomazi, bringing the total number of black rhinos in the reserve to 30. We have also begun a new Conservation Scholar PhD project which looks at the genetic diversity of the European Eastern black rhino population compared to wild populations and assesses the effects of translocation to assist in conservation planning initiatives. Another new Conservation Scholar PhD project will also be investigating large herbivore management in the face of altering habitats due to climate change.

Our work in Uganda is flourishing and our links with both the Uganda Wildlife Authority (UWA) and Uganda Wildlife Education Centre (UWEC) are growing. In June we funded and participated in the first ever national strategy for giraffe conservation in Uganda just two months after the birth of another Rothschild's giraffe calf to our herd here at the zoo. We have also been conducting a pilot study to investigate the potential presence of okapis in the Semuliki National Park. Our team installed 40 camera traps in the forest and trained 15 UWA rangers to recognise okapi signs. The cameras have already recorded species including chimpanzee, African forest elephant and leopard.

A real highlight to the year in the zoo was the birth of our first ever African wild dog puppies; the eight puppies were born at the end of November and made their debut to our visitors at the very end of the year, leaving their den for the first time on New Year's Eve. We were also delighted earlier in the year with the birth of red river hog twins in

May, and the arrival of red duiker as a new species to share the okapi habitat. Also new to the zoo were Cameroon two-horned mountain chameleon, they came to us as a confiscation from the illegal trade at the airport in Paris and we have already successfully hatched three young from eggs laid soon after arrival.

In Nigeria we continued our work with the National Parks Service to help with the protection of the Gashaka Gumti National Park and obtained camera trap images of 30 species of mammals in the park, including chimpanzees, giant pangolins and golden cats.





Conserving species of

SOUTH ASIA

Wild blue-crown laughing-thrush in Wuyuan County C Xie Xiao-fang

Asian elephants continue to be at the forefront of our South Asian regional programme and this year we were absolutely delighted to have yet another addition to our herd of Asian elephants. Only one month after the December 2016 birth of 'Indali' we had yet another birth in mid-January, this time a healthy male calf called 'Ayu' born to mum 'Sithami Hi Way'. The three youngsters 'Nandita', 'Indali' and 'Ayu' have been thrilling visitors all year with their playful antics.

It has been a year in which our 'living with tigers' project working on Bengal tigers and communities in Nepal has been very active. The first season of camera trapping in Bardia National Park yielded tigers in 48 grids out of 97, and 22 grids for leopards; this is really helping to give us an understanding of their distribution and the scale of potential conflict. We have analysed the data from our 2016 household survey of local communities and found that 85% of local community members admitted collecting natural resources, using them mainly for cooking fuel, roof material or to feed their livestock. These local communities are especially at risk of encountering animals such as tigers or leopards because they spend up to half of their day collecting natural resources in national parks or in community forests, yet 80% still agree that tigers and leopards should be protected. We are now conducting a livelihood and market analysis study within our project sites.

In the zoo a new mammal to the collection was the arrival of a pair of Indian muntjac deer, a species that we hope to mix with a number of other Asian ungulates across the zoo in their habitats.

Finally our work in China continues and the conservation sites in the Liang Shan region of Sichuan province that have received long-term Chester Zoo support are now leading the way in conservation practice in the region. We attended a conservation planning meeting with stakeholders for the blue-crowned laughing-thrush in Jianxi province where our continued support has led to protection of sites through a local wardening scheme and awareness raising of the species as part of promotion of the region for tourism.



Constructing area for pinstripe damba at Lake Tseny

Conserving species of

MADAGASCAR & MASCARENES

We appointed a new field programme coordinator for this region in 2017 and a review of our field projects during the year has resulted in a strengthening of our commitment to a number of projects.

In Eastern Madagascar we continued our support for the Mangabe protected area in partnership with Madagasikara Voakajy (MaVoa) where we are helping to protect vital tropical forest habitat for lemurs, chameleons and the critically endangered golden mantella frogs. Two of our lower vertebrate keepers joined the MaVoa team to assist with surveys of golden mantella frogs in Mangabe and these are revealing details of their population structure and movements which will help aid management decisions to boost their populations in the wild. In the zoo, both species of mantella frogs (golden and blue-legged) bred successfully and survival of the tadpoles was much higher than previous years, providing a much needed boost to these important insurance populations.

Also in Mangabe, we supported a new survey of diurnal lemurs using 60 monitoring plots to provide baseline information from which to assess the impact of community projects aimed at reducing the threat from hunting and shifting cultivation. There were a number of successful births within the ring-tailed lemur group at the zoo and we brought in a pair of white-belted ruffed lemurs to add to the lemur species in the collection. We also successfully bred another Madagascar endemic mammal, the lesser Madagascar tenrec hedgehog.

Another Madagascar endemic that we are helping MaVoa to save from extinction is the critically endangered pinstripe damba fish which in the wild is only found in one location, Lake Tseny in the north of the country. Despite its remoteness, Lake Tseny's wildlife is threatened from introduced fish predators and competitors and from unsustainable fishing practices. Construction of a semi-captive area for pinstripe damba in one inlet of the lake was completed and provided a safe area to breed and feed, free from invasive species

and fishing pressure. We also had our first spawning attempt from our pinstripe dambas in the aquarium at the zoo. Although the eggs turned out to be infertile this time, we learnt more about the conditions they require which will be used to encourage further breeding attempts for this vital 'conservation ark' species.

In Mauritius our work to prevent the extinction of a number of highly threatened endemic birds continues. Annual monitoring of echo parakeet, pink pigeon, olive white-eye and Mauritius fody was carried out and in September one of our bird keepers travelled there to work with the Mauritius Wildlife Foundation to manage the captive breeding centre at the Gerald Durrell Endemic Wildlife Sanctuary. She supervised teams of staff and volunteers who were hand-rearing pink pigeons and Mauritius kestrels, and she played a leading role in managing the hand-rearing programme for the Mauritius cuckooshrike.





Conserving species of

SOUTH EAST ASIA

Collection of pitcher plants

South East Asia has the highest proportion of threatened species in the world so it is no surprise that it is our biggest regional programme and 2017 was another busy year.

In the Philippines, we have supported the Katala Foundation to protect and monitor the last remaining wild populations of the critically endangered Philippine cockatoo on the island of Palawan since 2003. We were delighted and extremely proud, therefore, when Katala's CEO Indra Lacerna-Widmann was among the prestigious winners of the Whitley Conservation Award with her project "Partnering with prisoners to safeguard the Critically Endangered Philippine cockatoo." The award was specifically for Katala's work with the Iwahig open prison near Puerto Princesa, where we have supported their work with the prison authorities to provide inmates with employment, protecting and monitoring breeding and feeding areas for the cockatoo within the forested grounds owned by the prison.

A significant birth in April was a male Bornean orangutan, the first to be born at Chester in almost a decade, providing a welcome boost for the population of this critically endangered primate. We are working

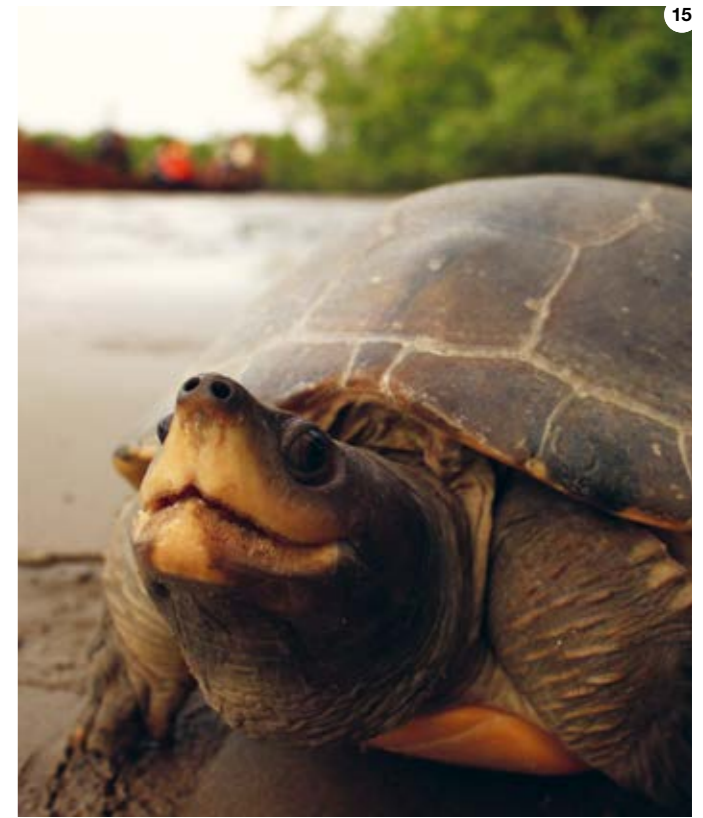
hard to prevent their extinction in Borneo through our partnership with the Hutan-Kinabatangan conservation programme in Sabah (Malaysian Borneo), and evidence of success was provided by a female orangutan and her young who were spotted crossing one of the bridges that we helped to construct in the Lower Kinabatangan Wildlife Sanctuary. The forest here has been regenerating along the river since it was logged about 70 years ago, providing vital habitat for orangutans and a wide range of other wildlife species, including hornbills. Our bird staff worked with Hutan to help hornbills by setting up large nest boxes for them in the forest, after trialling them on our birds in the zoo. We were delighted, therefore, when a pair of wild rhinoceros hornbills moved into one of these during the breeding season to raise a family.

We are making a significant contribution to the efforts to prevent the Javan green magpie from becoming extinct, hatching and fledging two further chicks at Chester, having bred the first birds to hatch outside of Indonesia in 2016. We also strengthened our support for the Cikananga Conservation Breeding Centre (CCBC) in Java who have rescued many birds and made preparations to develop a

breeding programme for some of the most threatened species. Our veterinary manager visited the centre, trained the Centre's veterinarian in basic avian medicine and set up a system for remote veterinary support from Chester Zoo. In the summer, BBC documentary maker Victoria Gill travelled to Indonesia with Chester Zoo staff to film a documentary about the songbird crisis, showcasing our work with the CCBC and with Taman Safari to tackle the problem and the 20 minute-long documentary was aired on BBC News Our World in the autumn.

Our national collection of *nepenthes* (pitcher plant) species was boosted by two newly described species from Thailand, *N. rosea* and *N. krabiensis*. Ours is probably the most important collection of these plants in Europe and is being used in important research involving DNA analysis by staff from Kew Gardens. Much of our work on these and our four other national collections of plants taxa goes on behind the scenes, but in May we were delighted to open our newly refurbished plant habitat at the 'Plant Project' next to June's restaurant. The circulation and layout of the habitat has been completely redesigned and new areas created to showcase our national collections and the important conservation work that we do with them.

In other projects focused on Indonesian species we supported the safe hatching and release of over 1000 critically endangered painted terrapins in Sumatra and the use of infrared cameras to survey Komodo dragons on the island of Flores. Following our discovery in 2016 of the continued presence of the critically endangered Javan warty pig in the wild in West Java, our project explored cultural attitudes to the pigs and revealed the cruel practices around pig fighting. The BBC also highlighted the plight of this species at the end of year.





Conserving species of

UK AND EUROPE

Painted lady in meadow

The expansion of our Nature Reserve, funded by a grant from WREN, progressed quickly with a 3ha wild flower meadow seeded and two ponds and a viewing platform created. In addition a total of 450 whips of native trees were planted which will provide much needed habitat and food supply for a variety of British wildlife species. The new habitats will take time to mature, but there are signs of wildlife already moving in with observations of kingfishers and several bat species recorded hunting over the area during the Wildlife Connections festival. We began an extensive monitoring programme for the reserve in 2017 which will provide us with baseline data and will continue annually to allow us to measure the impact we are having on local biodiversity.

We continued our work with the Vincent Wildlife Trust to reintroduce the pine marten into mid Wales using individuals translocated from a healthy population in Scotland. At least five females successfully bred resulting in the birth of 10 Welsh-born pine marten kits in 2017. One family resulted from a mating in Wales last summer between martens released in 2015, indicating that the pine martens are settling well in their new Welsh home!



We also continued to support the monitoring of the large population of hazel dormice at Bontuchel woodland in Ruthin, North Wales. This forms parts of the National Dormouse Monitoring Scheme and we remain the main coordinators of the North West Dormouse Partnership. This year we trained 20 volunteers in dormouse monitoring and handling techniques and continued nestbox surveys in spring and autumn.



In April, a fire at Heysham Moss, where we are working with the Lancashire Wildlife Trust to reintroduce populations of the locally extinct large heath butterfly, tragically destroyed much of the available habitat and there were fears that the population could not have survived. Incredibly though, observations in late June and July confirmed that some butterflies had emerged so there is hope that this population can build up again as the habitat recovers. It does emphasise, however, the importance of not relying too heavily on single sites and new sites for reintroduction are being considered.

Elsewhere in Europe, we were successful again in breeding our critically endangered bald ibises with eleven chicks hatched in 2017 and we continue to support the reintroduction of this species into the wild in Spain.



Rare newts breed in the UK

Our specialisms

CONSERVATION BREEDING AND MANAGEMENT

The imperative to prevent extinction has never been stronger than it is now, and conservation and breeding management is a vital tool in saving many threatened species. Chester Zoo is an acknowledged world leader in conservation breeding and management and this specialism is central to most of our conservation work. During the year we worked with more than 560 species of animals and more than 1200 important species of plants at the zoo in Chester.

This year has seen several new species which are right on the edge of extinction included in the work we do. Early in the year we began working with Montseny brook newt, a critically endangered European newt which only occurs at a single location in the Catalan Massif in north-eastern Spain. In collaboration with the Catalan government we are now a vital part of the conservation breeding programme for this species. We consolidated our work on Bermudan wildlife with the inclusion of a second snail species; *Poecilozonites circumfirmatus*, coming to the zoo for conservation breeding. We were also delighted that during the year all four of the Bermudan species we are now working with at Chester were successfully bred; paving the way to begin plans for future reintroductions on the island.

The science that underpins this essential specialism continues to go from strength to strength; our conservation scholars completed

research projects on the effects of captive environments on amphibians, the roles of scent communication in rhino social and reproductive interactions, and orchid-fungal symbiosis and propagation. A new conservation scholar began research on the influence of captivity on bird song and strategies for maintaining wild-type bird song in captive populations.

We have again been supporting the work in Indonesia on banteng, running a workshop with our partners Taman Safari in Prigen, Java, to train Indonesian zoo keepers in husbandry and techniques to safely transport animals. This is a vital component of the 'Global Species Management Plan' aiming to manage and conserve all populations of the endangered species, both wild and in zoos.

Coordinated and collaborative breeding programmes are of growing importance for many species to prevent their extinction and during this year we have been involved in more than 130 animal breeding programmes. These cannot be run alone and under the coordination of the European Association of Zoos and Aquaria (EAZA) we cooperate with a large network of zoos across Europe to manage these international cooperative breeding programmes. We also continue to manage five National collections of plants; orchids (*Pleurothallidinae*), pitcher plants (*Nepenthes*) and cacti (*Copiapoa*, *Matucana* and *Turbinicarpus*).



Our specialisms

WILDLIFE HEALTH AND WELLBEING

Sumatran orangutan mum Emma with one day old infant

Our staff are experts in the health and wellbeing of wildlife, caring for more than 560 species of animals at the zoo on a daily basis. These valuable skills are directly transferable to our work in the field with wildlife and our staff are sought after for training wildlife professionals around the world. The veterinary team has had an exceptionally busy year working both in the zoo and abroad on our projects, also acting as veterinary advisors for many of the conservation breeding programmes in which we participate, giving valuable support to BIAZA, EAZA and other partners both at home and abroad.

Support for orangutan conservation has again been a focus of the teams and as well as caring for the thirteen orangutans in the zoo (including baby Bornean and Sumatran orangutans born during the year) we have been actively supporting conservation and training in

Indonesia. In July we supported an Indonesian summer school and symposium on conservation medicine with our partners Orangutan Conservation/ Orangutan Veterinary Advisory Group. We also hosted the veterinary manager from the Sumatran Orangutan Conservation Programme (SOCP) for a three month intensive training placement with us here at the zoo in Chester.

Our fight to find effective preventions and treatments for EEHV to safeguard both captive and wild Asian elephants continues; we have initiated post-doctoral research into the virus and elephant immune systems with a new Conservation Fellow funded through our 'Never Forget' campaign. Also we have now developed new skills and provided the technical equipment necessary to enable us to carry out on site testing for the virus, allowing us to be even more responsive in monitoring and acting to safeguard our herd.



Coloration study on wild Bermudian skinks

Our specialisms

BIODIVERSITY SURVEYS AND MONITORING

We have a wealth of experience of surveying and monitoring biodiversity and the unique opportunity to work so closely with animals and plants in the zoo is critical to these skills. Being able to find and identify wildlife is a first step in protecting and conserving it and our teams have been active around the world this year on a huge variety of species and areas.

At the beginning of the year our staff expedition team headed off to Ecuador again, where they gathered crucial data on new populations of Ecuador amazon parrots and searched for elusive nesting sites. We have also been busy using automatic cameras to monitor wildlife (camera traps) in an effort to survey wildlife that otherwise remains undetected; this year in Nepal for tigers and leopards and in Uganda for okapi, chimpanzee and forest elephants, where we have also been training Uganda Wildlife Authority (UWA) teams in the techniques and skills needed to monitor wildlife. In Indonesia we have been focussing on surveys of some poorly recorded groups, such as reptiles, butterflies and moths, and several plant groups including pitcher plants. It is hoped that such surveys will help to identify important areas for conservation as well as uncovering previously unrecorded species.

Sometimes much more detailed monitoring of individual animals is required and this is where skills learnt in the zoo are often critical to success. In Bermuda we have again been focussing on the critically endangered Bermuda skink; conducting field surveys of four different sub-populations: Castle Island, Nonsuch Island, Southampton Island, and Spittal Pond. Skinks were captured and crucial information collected such as genetic samples, morphometric measurements and other data on the skinks' age and sex. Once captured, the lizards were marked using PIT tags (Passive Integrated Transponders), just as we do in the zoo, in order to gather information on their ecology and distribution in the future.

Much closer to home we have been helping to monitor the endangered Llangollen whitebeam tree; the tree only occurs at two sites on the English – Welsh border. We have been using drones to survey the steep inaccessible cliffs of the Eglwyseg escarpment in Denbighshire, to help identify trees and count the population, whilst at the same time using our botanical skills in the zoo to grow new trees of this threatened species from gathered seeds.



Our specialisms

HUMAN-WILDLIFE CONFLICT

Dr Ximena Velez-Liendo in the Bolivian mountains for her project enabling co-existence of Andean bears & farmers

Some of our large iconic mammals pose a potential threat to life and livelihoods in the wild when they come into contact with human communities, presenting a significant challenge to conservationists working in landscapes under pressure from human encroachment. We are working in partnership with the Wildlife Conservation Research Unit (WildCRU) at the University of Oxford, together with partners in the field in India, Nepal, Bolivia and Brazil to tackle these problems, using systematic approaches to find the best solutions to human-wildlife conflict.

In Nepal our Living with Tigers project, funded by the Darwin Initiative and delivered in partnership with Green Governance Nepal, aims to find ways of enabling people living close to the Chitwan and Bardia National Parks to tolerate tigers and leopards. Our camera traps are revealing increasing incursions of these predators out of the national parks and into the surrounding landscape, threatening people and their livestock. We are providing predator proof pens to allow livestock to be safely locked up at night, and biogas stoves to reduce the need for people to collect firewood from neighbouring forest in order to reduce the risks. It is hoped that this will prevent tiger and leopard populations being isolated inside the national parks and allow animals to travel freely along habitat corridors that connect the landscape.

Our work in Bolivia on Andean bears is run by Conservation Fellow Ximena Velez-Liendo who was honoured with a prestigious Whitley

Conservation Award for the project 'An uphill climb: enabling coexistence of Andean bears and farmers in the Bolivian mountains' in May 2017. This project tackles negative public attitudes to bears because of the belief that they pose a significant threat to livestock. Through a deeper understanding of perceptions of bears amongst local communities we are designing social marketing campaigns to improve the image of the animal and secure a brighter future for them in the Andean mountains of Bolivia.

Our long-running Assam Haathi project in India continues to provide practical solutions to human-elephant conflict in a number of communities in Assam. We disseminated this to Government bodies working in other parts of India through presentations at workshops and circulation of our human-elephant conflict handbook and we are now developing a larger scale project with a new partner that will extend working solutions to conflict mitigation across a much wider area in India.

Our expertise on these ground breaking projects has been brought together through the leadership of the IUCN SSC task force on human-wildlife conflict by Alex Zimmermann, our head of Conservation Science. It was a busy year for Alex who led a number of workshops on elephants, tigers and other big cats over the year and provided advice to international agencies and funders.



Our specialisms

An orangutan bridge under construction in Borneo

LIVELIHOODS & SUSTAINABLE DEVELOPMENT

Many of our field projects have a livelihoods element to them as we work to reduce the threats that people pose to wildlife. Very often unsustainable exploitation of wildlife and natural resources can be tackled through finding sustainable alternative sources of income that can actually lead to improved incomes and standards of living, leading to a win-win situation for people and wildlife.

In Mauritius, the endangered Mauritius fruit bat will visit commercial orchards and help themselves to lychees and mangos, thus damaging the livelihoods of local farmers. The problem is so acute that it has led to Government sanctioned culls, despite the highly threatened status of the species. By working with local farmers on alternative means of excluding the bats from the trees through netting, coupled with a more regular pruning regime, bat damage can be reduced and crop yields increased. Our work in bringing the stakeholders together to develop these alternative methods to culling has so far ensured that no cull has been sanctioned this season.

Our sustainable palm oil campaign recognises the livelihoods of people living in Indonesia and Malaysia as vital to its success. Palm oil is an important source of livelihood for large numbers of people in these two countries which together supply about 85% of the world's palm oil, whether they are small scale producers or plantation workers. Plantations that meet the sustainable palm oil standards not only respect wildlife by not cutting down rain forest and encouraging habitat corridors, but they also support their workers through better employment practices and fair wages. We began a plan to make Chester the first sustainable palm oil city by raising awareness of this issue amongst local restaurant owners and catering outlets, and encouraging them to sign up to our pledge to remove non-sustainable palm oil from their supply chains. By the end of 2017 we already had over 10 organisations who have made the pledge so far, a number of others engaged with us working up to the pledge, and 2 who have gone through the whole process and are now on our website as 'champions'.



Our specialisms

Safari Ranger outreach

VISITOR AND COMMUNITY ENGAGEMENT

Within our Safari Ranger programme, a trial into the effectiveness of repeat visit project based learning with schools was published in the Journal of Zoo and Aquarium Research. It provided strong evidence of the positive impact of our safari ranger workshop programme on the knowledge and attitudes of students towards wildlife and conservation. As a result an ambitious plan to expand the safari ranger programme was agreed and five new safari ranger posts were created, allowing us to spread the programme into Liverpool and Manchester, targeting schools with no previous connection with Chester Zoo.

We continually evaluate the work that we do on our educational programmes and lead research to investigate the short and long term impacts of zoo visits on people's understanding of wildlife and how changing our behaviour can help reduce the threats they face. Our Conservation Social Scientist, Andy Moss, was awarded his PhD in 2017 on 'The educational value of zoos and aquariums' from the Durrell Institute of Conservation Ecology at the University of Kent. The study showed that visitors to zoos and aquariums showed an increase level of their biodiversity understanding and knowledge of actions to help protect biodiversity after being exposed to a global biodiversity education campaign. We also conducted a piece of research and published a report highlighting the impact of volunteering in zoos. 522 individuals volunteering in 19 British and Irish Association of Zoos and Aquariums (BIAZA) collections took part in the research. The analysis revealed significant positive self-reported impacts on the volunteers in areas such as health and well-being, knowledge and skills, personal development, connection with people and support and training.



WELCOMING OUR VISITORS

In order to achieve our mission, all of our staff are engaged in working towards being a world class attraction. Despite being named the world's number three zoo by Trip Advisor during the summer of 2017, we continue to drive towards better standards to constantly improve the experience of all our guests and members.

Ensuring the team has the right skills needed to provide exceptional customer service resulted in over 700 staff being trained in either in the World Host 'Principles of Customer Service' or the 'Ambassador Workshop'. The development courses were well received by the team and have been used this year to set the standard of guest care at the zoo. Plans are already in progress to build on this in 2018 and beyond.

A drive towards developing core visitor related infrastructure included a project to improve car park surface and drainage, further enhancements to guest toilets and a refurbishment of one of our more popular food and retail areas near the main entrance, now renamed Elephant Bazaar.

In the centre of the zoo we created a large Madagascan themed play space, Madagascar Play! The new play area incorporates a wide range of play experiences including water and sand play, adventure ropes and custom design Baobab Tree slide.

A second year of The Enchantment of Chester Zoo, our very own Hallowe'en inspired theatrical event, was hosted during October, and our now annual event at Christmas, The Lanterns welcomed just over 92,000 visitors. Both events proved popular with first time and returning guests alike with new elements being introduced to both to keep them fresh and different.

Our retail team introduced a number of new and exciting products to the shops including a variety of pictures and gift items developed in partnership with renowned artist Steven Brown. The team also won 'Best Retail Initiative' at the Retail Greats Awards for introducing a new Charlie Bear limited edition Hari elephant which when sold helps raise vital research funds to combat EEHV, through our Never Forget campaign.

Our Food and Beverage (F&B) team embraced The Soil Association Food for Life accreditation which supports serving local and fresh food

cooked by chefs who really care about quality and ingredients. For our visitors it means they have the reassurance to know that the majority of food on the menu is freshly prepared, free from undesirable trans fats, sweeteners, additives and uses ingredients from sustainable and ethical sources. The Food for Life accreditation will also build upon our achievements of ensuring that where our products contain palm oil it is from a sustainable source and that all of our fish come from sustainable fishing sources.

The team has also been busy developing a new concept in The Oakfield, the original Grade Two Victorian property at the heart of Chester Zoo. The Oakfield will reopen as a high quality Pub Restaurant and function venue in summer of 2018.

Finally the F&B team won the 'Family friendly business of the year' as part of the Visit England Excellence awards in recognition of the exceptional family focused food service they delivered during the year.





DISCOVERY & LEARNING

During 2017, 118,429 visitors came to the zoo as part of an educational group visit and of those 30,214 attended a curriculum linked workshop. Both figures represent large increases on 2016. Some of this increase was driven by a new free entry initiative which launched in July and offered free entry to schools booking to visit from November 2017 to February 2018. 13,580 people visited as part of this scheme in November and December, with around 24% coming from schools who had never visited the zoo before (a much higher percentage than normal). New or redeveloped workshops for key stages 1, 2 and 3 may also have contributed to the increase in engagement. The new workshops provided links to new areas of the curriculum as well as increasing our use of technology and introducing more interactive activities. The way that we use technology in our workshops was shared with peers at the annual BIAZA Presenters and Educators Conference in November.

In addition to increasing access to the zoo via school visits, we have also increased our outreach work. The outreach team increased from one to six Safari Rangers over the year. This expansion enabled us to increase our reach both in terms of numbers of people engaged and the geographical area we cover. We now travel up to 60 minutes from the zoo to include the urban hubs of Liverpool and Manchester. During the year the Safari Rangers delivered 1,171 sessions, creating 37,298 participations, more than 3 times as many as in 2016. Alongside delivering one off workshops and attending high profile events such as the Just So Festival, the team continued to develop repeated engagement projects working in partnership with schools to engage children and young people in taking action for conservation. In May, the projects we delivered in 2016 won a Gold BIAZA Award.

Our outreach work extended outside the region. Alongside the science and field programmes teams we joined two other BIAZA

collections to engage audiences with the scientific role of zoos through a stand at the New Scientist Live event in London. Science engagement activities were also delivered as part of the Manchester Science Festival in October.

One particularly successful outreach project involved working with St Bernard's RC Primary School in Ellesmere Port. There we worked with teachers to enable them to take on our Sing for Songbirds campaign across the whole of their curriculum, so that all pupils, from reception to year six, learnt about the South East Asian songbird crisis across all subjects as well as learning what they could do to help British songbirds. A particular highlight of the project was the children and teachers organising their own campaign day and going to tell shoppers at Cheshire Oaks shopping centre why they should care about songbirds. A video about the project was shown at the annual EAZA conference as an example of what can be achieved with education work on this subject, as part of the launch of the EAZA Silent Forest campaign. Alongside the Headteacher from St Bernard's, Our Community Engagement Manager also presented the project teachers at an Education First conference. This project has led to a further partnership project between the zoo's learning team and the Ignite Teaching School (for which St Bernard's is the lead organisation). During the 2017/18 academic year we are working with 30 schools on a teacher professional development programme to enable them to create similar conservation inspired curricula for their schools.

The Heritage Lottery Fund supported Wildlife Champions project, the community training arm of our Wildlife Connections campaign, came to end in November. The project has seen us train over 100 Champions, giving them the skills and motivation to create wildlife friendly spaces and run related activities in their communities. Initial evaluation identified a potential reach through the Champions of

8,000 people and overall the project has engaged thousands of people in activities to inspire them to record, protect and create habitat for some of our most precious UK species.

In support of our work to support group leaders, extend a visit and empower teachers to teach more about conservation in their classrooms, we continued to grow our online learning resource platform. During the year more than 27 new resources were added. Market research with teachers has shown the resources are very well regarded, especially by primary school teachers.

Our daily programme of learning activities continued to engage large numbers of zoo visitors, with 244,200 taking part in talks, discover sessions and other events throughout the year. To help us understand the impact of our in-zoo learning work, we commissioned NEF Consulting to work with us to create an evaluation framework. An initial study based on the framework showed some positive results in terms of how our activities contribute to learning and visitor behaviour change and we will continue to refine and develop this work in the coming years.

In September, we hosted the second Wildlife Connections Festival, celebrating UK wildlife and providing opportunities to get involved in nature inspired activities on our nature reserve. This year we also added the first ever public zoo sleepover, with 150 people camping overnight and taking part in nocturnal activities such as bat walks and star gazing.

Throughout the year we developed playful approaches to engage visitors with the zoo and with wildlife. Over the Easter holidays over 3,000 visitors joined us for a variety of animal themed games and activities. Then when Madagascar Play! opened in May we launched a full programme of playful activities for Base Camp including our Wild Adventure interactive show, regular storytelling and games, engaging 14,000 people over the summer period.

Our exhibitions and interpretation team created playful pathways across the zoo and challenged visitors to balance like a gibbon or move playfully along our skipping lane. This was all underpinned by the team working with play experts to reflect on the importance of play and how it can be enabled at the zoo.

Our project to update all of the signage across the zoo made significant progress during the year and is on track for completion mid-2018. A brand new interpretation scheme was also created for the new area of Islands which opened in the summer. With a



strong focus on the illegal wildlife trade, our work with South East Asian songbirds and the Wildlife Witness app, the scheme included traditional signage alongside a new large scale interactive exhibit. This included video, imagery, object and tactile items demonstrating different aspects of the illegal wildlife trade, and in terms of zoo exhibitory represents a much larger scale of interactive exhibit than has previously been installed.

As well as developing our work in the zoo, the Discovery and Learning Team were also involved in sharing work internationally. Our Head of Learning went to work with our field partners Hutan, on the development of a new masterplan for their education work and was also invited by the Chinese Association of Zoological Gardens to advise on the development of new training for zoo educators. Our Community Engagement Manager and Assistant Team Manager (Zoo Rangers) travelled to Java to deliver training for 35 zoo educators from Indonesian zoos, covering a range of topics from education programme design and evaluation through to different delivery techniques. Our Community Engagement Manager also continued to provide active support for education work delivered by the Cikananga Conservation Breeding Centre, building their capacity to deliver effective education and providing an excellent link for our UK based songbirds related work.

Overall, 2017 has seen the Chester Zoo learning team deliver educational experiences to more people than ever before. We have extended our reach both in the zoo and outside, whilst also continuing to develop the quality of the experiences we provide and underpinning our work with evaluation to understand the conservation impact of our work.





Early morning walk to the view point to look for parrots

EXPEDITION 2017 ECUADOR

The 2017 Chester Zoo annual expedition ran from 22nd January - 5th February to tie in with the breeding season of the focal species, the endangered Ecuadorian Amazon parrot.

The trip was organised and delivered in partnership with Fundación Pro Bosque, an Ecuadorian NGO we have worked with since 2012. This was the second expedition to the area – the dry forests and mangroves of the south west coast of Ecuador.

The team consisted of 12 staff, one half with particular skills relating to the research, the other half selected at random from staff wanting to volunteer. This allowed staff who may not as part of their day to day job, gain some valuable first hand experience of field conservation.

The focus of the expedition was to support our ongoing conservation research and monitoring of the species, to share skills and to build new /strengthen existing partnerships.

Over the two weeks, the team managed to gather a huge amount of information. This included over 20 behavioural observations of the species and 30 counts of parrots at their roost sites. They even counted over 300 individuals at a single roost site we previously had not studied.

Additionally, the team gathered a large amount of finely detailed habitat information from the forest, covering over 70,000 square meters. This helps to determine exactly what features of dry forests are so important to the species, which can then be used to test the suitability of other forests around Ecuador.

They also spent time working with the animal care staff at Fundación Pro Bosque, who are responsible for the Rescue Centre which receives confiscated animals from the pet trade.

They were able to introduce simple methods of enrichment and enclosure modifications, to help to improve the welfare of a number of species, using local materials and repeatable methods, such as bamboo enrichment feeders, local timber hanging perches, leaves for substrates and scatter feeding.

Finally, a community survey was piloted, which has now been rolled out across the whole range, gathering information from local community members about the range and distribution of the species, but also about local perception of population trends and the numbers being kept illegally as pets.

Chester Zoo has now been involved with field research on the south west coast of Ecuador for over five years, and the species has been part of the zoo collection for over 30 years. It is a highly endangered species and information from this ongoing work and collected during expeditions, will help inform how best to conserve it into the future.



KEEPER FOR A DAY

Providing veterinary support in Brazil with lowland tapir

The Chester Zoo 'Keeper for a Day' initiative provides a unique opportunity for the public to experience a day in the life of a zoo keeper. The experience includes a full day working alongside keepers on an animal section. In 2017 the income generated from these experiences supported 22 staff to participate in a variety of projects, conferences and meetings; this is in addition to the amount of staff travel that usually occurs as part of our on-going conservation activities. Keeper for a Day supported activities allow staff to utilise specialist skills to support field projects, to engage in activities to learn and share new skills and develop a better understanding and appreciation of conservation projects. These trips can strengthen relationships with conservation partners, and often result in staff returning as 'project champions'. The annual expedition, another great opportunity for staff to visit field projects, is also supported through the Keeper for a Day fund.

This year the fund supported 13 staff to participate in the Ecuador expedition, 9 staff to participate in activities overseas plus supported two project partners to visit Chester Zoo and spend time with our teams to exchange knowledge and skills.

Several keepers accessed the fund to support attendance at conferences and workshops, including the two staff attending and presenting at the Hornbill conference in Sarawak, staff contribution to the Orangutan Veterinary Advisory Group workshop and attendance at the International Rhino Keepers Association Conference in Denver. These events provide great opportunities for staff to gain new skills and knowledge, but also to network with other professionals and share their experience with a wider audience.

A number of staff also used the fund to enable them to visit and participate in field projects, this included assisting with Northern Bald Ibis reintroductions in Spain; helping monitor giraffe populations in Kidepo National Park in Uganda and providing veterinary support to colleagues in Brazil working with lowland tapir and giant armadillo. Members of the Discovery & Learning team also accessed Keeper for a Day funding to visit field projects in Madagascar, providing some great media that will be used as we develop Madagascar themed areas within the zoo. Another Discovery and Learning team member was also able to join a team of Chester Zoo staff who participated

in the Global Species Management Plan (GSMP) workshops for banteng, anoa, babirusa and other SE Asian GSMP species in Indonesia; this resulted in her taking up the official advisory role for education activities for the Sumatran tiger GSMP.





Building works for the lemur walk-through experience

MAINTAINING A SAFE ENVIRONMENT

Maintaining a safe environment for our guests, staff and animals has always been at the forefront of our operations. In order to continually improve there are three key areas that the team focus on – developing a safety culture, monitoring progress and implementing change to drive improvement.

The teams have made significant progress developing the safety culture within the organisation over the past number of years. One key initiative has been to introduce a more comprehensive training and development programme. 2017 saw the continuation of the ARK programme (Attitude/Responsibility/Knowledge) which gave every new member of the team the basic awareness needed to deliver a safe environment for guests and colleagues alike. In addition a total of 28 managers and supervisors were trained in IOSH Managing Safely (Institute of Occupational Safety and Health), 69 members of the team received British Heart Foundation Heart Start training. Also 24 additional members of staff received basic first aid training and 10 of the team were trained in FPOS(I) First Person on Scene intermediate level training. The team won the UK Heart Safe Awards for leisure and tourism for the 3rd year in a row.

Monitoring performance and progress is supported by OSHENS (Occupational Safety, Health and Environmental Notification System) which is used to capture accident and near miss information, risk assessment and contractor management.

One of the key changes this year is the introduction of a new contractor handbook and updated permit to work system which is important to support the increased onsite construction work linked to the strategic development plan. Also to support the safety of our team working across the globe a new digital travel booking system and field working safety training programme was introduced.

Finally a new food safety policy and management system has been introduced to continue the very high standard of food safety achieved by the Food & Beverage team.



Madagascar Play! area

COMMUNICATION AND COLLABORATION

The zoo's PR team generated more than 8,000 pieces of press coverage to promote the zoo in 2017. This created more than 1.3 billion opportunities to see our coverage (the combined circulation of each piece of coverage) - across print, broadcast and online media - with an 'Advertising Value Equivalent' of £16.5 million.

On social media, on average almost 500,000 people per day consumed content from Chester Zoo's pages during 2017 - across Facebook, Twitter and Instagram. Facebook accounted for the majority of this reach, followed by Twitter, while Instagram is the fastest growing channel for the zoo. We remain by far the UK's most followed and most engaged with zoo on social media. Additionally, this extensive social media reach is amplified many times by the accounts of media outlets covering our stories.

This PR activity, with integrated messaging across press and social media, is primarily focused on two overarching and highly interconnected objectives: driving visitors to the zoo and communicating our work to protect biodiversity and preventing extinction.

Conservation focused PR campaigns in 2017 included coverage for our work to tackle unsustainable palm oil and the illegal wildlife trade, among others. The major new Sing For Songbirds campaign generated widespread media coverage regionally, nationally and internationally throughout the year, with the highlight being a dedicated BBC News Channel documentary on the South East Asian songbird crisis and the zoo's response. This aired in December accompanied by extensive coverage across BBC national TV news, radio and online.

The most high profile ex situ news story of the year was the birth of Nurus the Rothschild's giraffe in the zoo in April, which featured in the almost every UK mainstream media outlet, from the Guardian to the Daily Mail and in widespread UK broadcast media from BBC Breakfast to This Morning – as well as a range of high profile international outlets. Our conservation breeding programme allied to our Act For Wildlife field programmes were key messages for the story. On social media, the zoo's footage was viewed more than 20m times, including 13m

views on our own Facebook page after it was shared by some of the world's most top five influential social media outlets.

Meanwhile, series three and four of The Secret Life of The Zoo aired on Channel 4 throughout the year. The programme enhances the zoo's reputation as a world leading centre for conservation and animal welfare with passionate, dedicated staff inspiring a love of nature and a connection with our animals, while also continuing to be a major factor driving visits to the zoo, with increases in visitors from beyond our usual drive time. The show has also aired in more than 80 countries worldwide, correlating with an increase in international visits to the zoo.

Key visitor focussed marketing campaigns which ran across the year were Bloom, in Spring; Play! for the summer months; Enchantment for October half term, and The Lanterns for the Christmas period.

Once again we utilised extensive advertising across digital and traditional platforms to reach new and existing audiences from across the UK, driving visits and sales of memberships.

Our visitor research showed that our success was driven by a number of factors including the continued interest in Islands, our event programming, the impact of tv advertising and 'The Secret Life of the Zoo' on Channel 4, and the Play! campaign.

We increased the number of "lapsed" visitors returning to the zoo and, due to the Play! campaign promoting the new Madagascar play space we welcomed many families, looking for space and events to enjoy time together.

It was also pleasing to learn that visitors on 92% of visits from June 2016 to May 2017 advised they would definitely recommend a visit to the zoo, the highest number and proportion in four years of research.

The number of members of the society increased again in 2017, from 88152 at the end of 2016 to 94905 at the end of 2017. This reflected the growth in support for our work, and a recognition of the valuable and multiple benefits that zoo membership offers.



Fundraising

THANK YOU FOR YOUR SUPPORT

Chester Zoo is enriched by our generous and passionate community of supporters; those who not only provide funds to allow us to make real progress in our global conservation work, but also spread the message through their love and dedication to the charity.

We've been truly inspired by the response to our Never Forget campaign, with even more funds raised thanks to the creativity and panache of our retail partners Charlie Bears, Royal Crown Derby and Joe Davies. And we were super proud to see our exclusive cuddly Hari make an appearance in the 2017 ethical Christmas present guide!

Then there are the grants that help us do incredible educational, scientific and capital projects. Phase 2 of the Nature Reserve is blossoming thanks to a grant provided by WREN's FCC Community Action Fund, and our high-profile 'Wildlife Champions' community programme wouldn't have been possible without the support of the Heritage Lottery Fund (HLF).

We're thrilled to have welcomed new faces to our corporate supporter family; not only backing our conservation work financially, through sponsorship and membership, but also by using our event facilities to have fantastic team days out, by donating their time to assist our teams around the zoo and becoming firm advocates for how businesses and charities can enjoy fruitful and joyous relationships.

2017 saw our local community getting fit and having fun outdoors as part of our 'Summer Stampede' sponsored walk through the zoo, all in aid of our EEHV research. With our ele-ears firmly in place, it was a wonderful festival of learning and family-fundraising, which brought us all together to see the impact our donors genuinely make.

With more and more of you so generously thinking about what the future holds for wildlife, we thank everyone who has given a personal gift to prevent extinction. The incredible gifts in Wills received this year will have a powerful impact on conservation for many years to come. We are truly honoured to fulfil lifetime wishes and celebrate the lives of loved ones.

We say it every year, and please don't ever forget it – you're amazing! Thank you.

With thanks to all our 2017 supporters:

Corporate Champions

Airbus
Bank of America Merrill Lynch
ConvaTec

Corporate Supporters

3D Squared
Darwin Escapes
M&S Bank
Sanctuary Care
Tiger Trailers
Toyota UK

Corporate Adopters

Adlington Hall
CLM
DTM Legal
Hafren Water
Henry Williams & Son Ltd
Investec Wealth & Investment
Macdonald Hotels
Original Cottages
Safer Surfacing
Store First
Thew Arnott
Tower Supplies
Waters Corporation
Zebra Finance

Retail Partners

Charlie Bears
Royal Crown Derby
Joe Davies Ltd

Trusts, Grants & Gifts

The Ampelos Trust
Carole L Brown
Steven Brown
The Eric & Dorothy Leach
Charitable Trust
Heritage Lottery Fund North West
The Philip Barker Charity
The Ronald & Kathleen
Pryor Charity
WREN's FCC Community
Action Fund

Incredible Individual Gifts

David Berry
Dennis and Pauline Dibble
Doreen and Sybil Garth
Lyn Susan Gray
Chris Greatorex
Harry Frederick Hamilton
William Langley Richardson Oliver
Dorothy Procter



And all those celebrated and remembered with love on the Chester Zoo Giving Tree



OUR FINANCIAL PERFORMANCE

2017 was a strong year and, whilst not quite reaching the record levels of 2016, the year generated income of £41.4m (2016: £42.1m). Total expenditure rose by 4% to £38.5m (2016: £36.9m) resulting in a £2.9m net increase in our funds (2016: £5.2m).

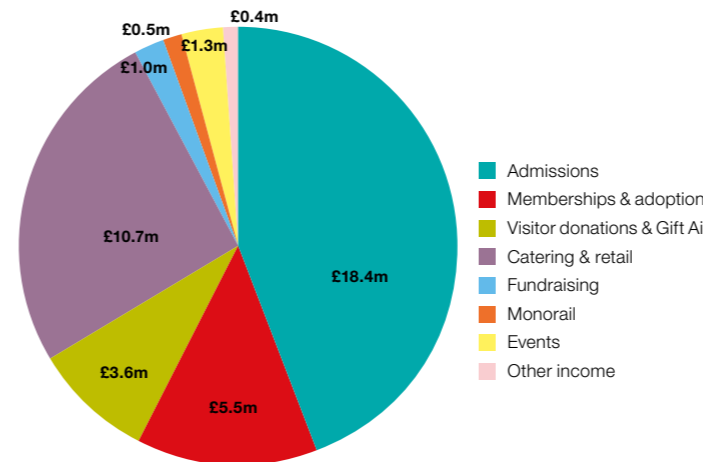
Income

The bulk of the Society's income comes from the Zoo's visitors and members, in the form of admissions and other charges. Following a record year in 2016, total visitor numbers fell by just under 2% from 1,898,059 to 1,866,628 in 2017. Pleasingly, membership numbers increased by 7% to 94,359 during the year and have more than doubled in the last 5 years. Our winter Lanterns event attracted a record number of visitors, and in November we commenced an initiative to provide free school visits during the winter months. Visitor related income for 2017 was £26.3m (2016: £26.9m).

As a registered charity the Society generates voluntary income from visitor donations, Gift Aid, animal adoptions, grants, legacies and other donations. Donations and Gift Aid on Admission fell by £0.2m, but this reduction was offset by a £0.5m increase in grants and other donations, including legacies. Total income from donations and legacies was £4.0m (2016:£3.7m).

The Society's trading subsidiary, Chester Zoo Enterprises Limited, which provides retail and food & beverage offerings across the Zoo site had a turnover of £11.0m in 2017 (2016: £11.4m), this performance was impacted by the closure of Oakfield House for redevelopment during the year.

An analysis of the sources of 2017 income is shown in the following chart:



Expenditure

In 2017 we spent £38.5m (2016: £36.9m), excluding capital expenditure.

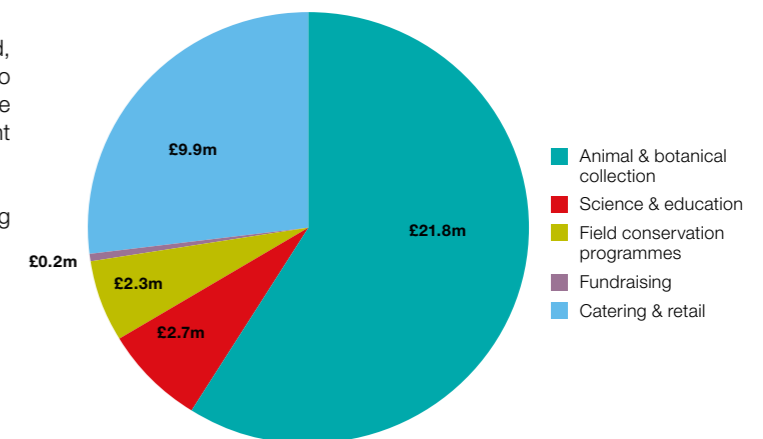
Resources expended on our charitable activities, including the costs of maintaining the animal & plant collection, the visitor facilities, science and education and our field conservation programmes, together with related support costs totalled £26.8m (2016: £25.7m). In addition we spent £0.2m (2016: £0.2m) generating our voluntary income.

Chester Zoo Enterprises Limited had costs of £9.9m, excluding £0.7m of rents paid to the Society, and it made an operating profit of £0.4m in 2017 (2016: £0.6m) which is donated to the Society.

Costs also include a £1.5m contribution to the closed defined benefit pension scheme (2016: £1.0m). At 31 December 2017, the scheme reported a £5.4m surplus (2016: £2.1m surplus) under Financial Reporting Standard 102. The surplus is not recognised in the financial statements as the Society cannot gain economic benefit from it.

By far the biggest element of expenditure relates to our employees and the cost has been impacted by both increases in the number of employees and the impact of the national living wage and auto-enrolment pension contributions. Our average Full Time Equivalent (FTE) headcount for 2017 rose to 555 from 545 in 2016. A third of these employees worked directly in support of the Society's charitable objectives, either with our animal & plant collection or in education, science and research. In addition we benefitted from the hard work of a team of over 200 passionate volunteers.

The chart below shows a breakdown of the Society's expenditure.



Capital expenditure

During 2017 we spent £9.6m on capital expenditure (2016: £5.3m). This expenditure included the purchase of Woodside Farm, a 108 acre farm to the north of the zoo estate which will be used to support future zoo operations. We completed development of a new habitat at Islands for our Malayan Tapirs and Sun Bears, made improvements to our visitor car parks, opened our new Madagascar Play! area and funded roadworks close to the entrance to the zoo. Ahead of the year end we commenced redevelopment of the Penguin Island habitat which opened in February 2018 and the second phase of redevelopment of Oakfield house which will re-open in summer 2018.

Cash generated from operations of £8.9m (2016: £11.3m), together with a small increase in borrowings, was used to fund these capital developments. At 31 December 2017 the Society had a net borrowing position of £4.1m (2016: £3.2m).

Full details of our financial performance can be found in the 2017 Trustee's Report and Financial Statements.

HIGHLIGHTS OF THE YEAR



January

New born Aayu joins Indali and the herd



February

Kirk's dik dik Thanos becomes internet sensation



March

Lowland streaked tenrecs join the collection



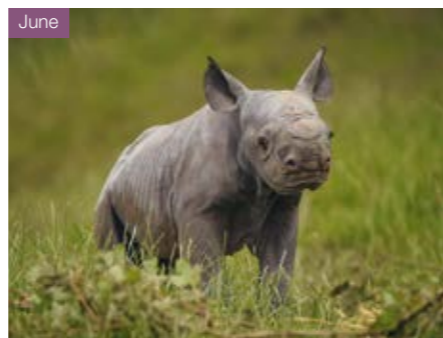
April

Rothschild's giraffe calf Narus is born



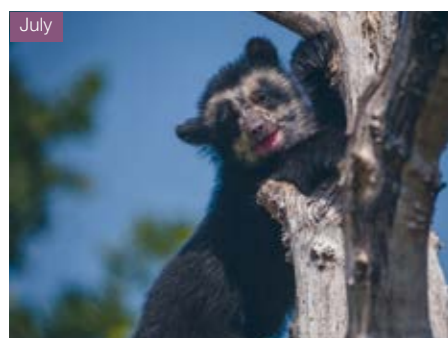
May

Conservation Fellow, Ximena Velez-Liendo receiving a Whitley Award



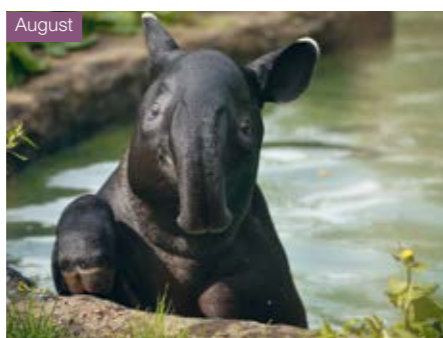
June

Two black rhino calves are born in a week



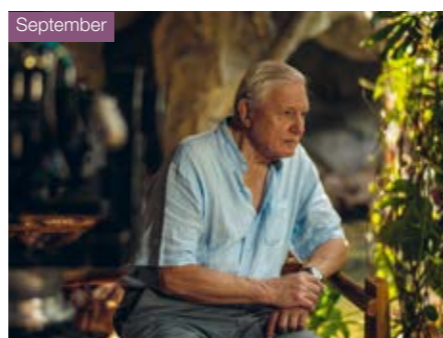
July

The zoo's first ever Andean bear cub



August

Stunning new Islands habitats open



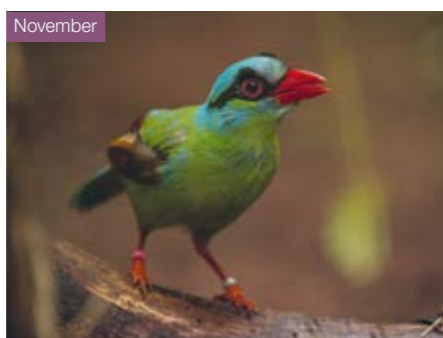
September

Sir David Attenborough filming Sunda gharials



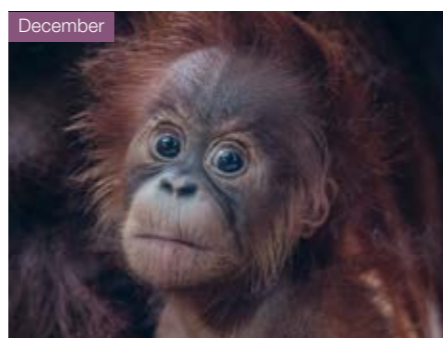
October

BBC journalist Victoria Gill with Curator of Birds Andrew Owen in Indonesia, on the songbird crisis



November

Critically endangered Javan green magpies fledge



December

Rare Sumatran orangutan is born

Front cover: Javan green magpie

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.org

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The North of England Zoological Society

TRUSTEES' REPORT AND FINANCIAL STATEMENTS

Year ended 31st December 2017

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REFERENCE AND ADMINISTRATIVE DETAILS OF THE NORTH OF ENGLAND ZOOLOGICAL SOCIETY, ITS TRUSTEES AND ADVISORS

TRUSTEES' REPORT FOR THE YEAR ENDED 31 DECEMBER 2017

Honorary Positions

Vice Presidents

The Right Honourable Lord Wade of Chorlton, kt, JP
The Honourable Lady Jane Heber-Percy

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

Elected by the members

Bruce Ursell – Chairman
William Beale – Vice Chairman
Malcolm Ardron – Vice Chairman (Appointed 27/06/2017)
Rebecca Burke-Sharples CBE – Vice Chairman (Resigned 31/03/2017)
Professor Malcolm Bennett (Retired 07/10/2017)
Edwin Christmas (Elected 27/06/2017)
Penny Coates (Elected 27/06/2017)
Sandra Donnelly
Professor Richard Griffiths
Professor Russell Newton
Angela Pinnington
Paula Spence (Elected 27/06/2017)
Simon Venables
Professor Peter Wheeler (Retired 27/06/2017)
Tony Williams (Retired 12/06/2017)

Co-opted by the Trustees

Catherine Buckley

Principal Executives

Dr Mark Pilgrim – Chief Executive Officer
Jamie Christon – Chief Operating Officer

Company Secretary

Aarco Services Limited represented by Nick Clarke

External Advisors to the Animal Health, Welfare and Husbandry Sub-committee

Dr Julian Chantrey
Brian Coles
Michael Stanford

External Advisors to the Ethical Review Committee

Dr Ian Dunbar
Dr Richard Preziosi
Dr Thomas Webb

External Advisor to the Audit and Risk Management Committee

Simon Bleckly

Independent Auditor

PricewaterhouseCoopers LLP, No 1 Spingingfields,
1 Hardman Square, Manchester, M3 3EB

Internal Auditor

RSM, 20 Chapel Street, Liverpool, L3 9AG

Solicitors

Aaron & Partners, Grosvenor Court, Foregate Street, Chester,
CH1 1HG

DTM Legal LLP, Archway House, Station Road, Chester, CH1 3DW

Hill Dickinson, No.1 St. Paul's Square, Liverpool, L3 9SJ

Jolliffe & Co, 6 St John Street, Chester, CH1 1DA

Bankers

Santander, 7th Floor, 4 St Paul's Square, Liverpool, L3 9SJ

Actuaries

Mercer Human Resource Consulting, Exchange Station,
Tithebarn Street, Liverpool, L2 2QP

Introduction

The Trustees of the North of England Zoological Society ("NEZS" or "the Charity") are pleased to present their annual report together with the consolidated financial statements of the Charity and its subsidiaries for the year ended 31 December 2017 which are also prepared to meet the requirements for a directors' financial statements for Companies Act 2006 purposes. NEZS is a conservation and education charity which runs Chester Zoo. Further information about NEZS's activities during 2017 can be found in the "Chester Zoo Annual Review" which is published separately and can be downloaded from www.chesterzoo.org.

The financial statements comply with the Charities Act 2011, the Companies Act 2006, the Memorandum and Articles of Association, and Accounting and Reporting by Charities: Statement of Recommended Practice applicable to charities preparing their financial statements in accordance with the Financial Reporting Standard applicable in the UK and Republic of Ireland (FRS102).

Strategic Report

Objectives and Strategy

The Society's objects, as set out in its Memorandum and Articles of Association, are

- to promote the conservation of the physical and natural environment by promoting biodiversity; and
- 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.

Our Mission

Preventing Extinction

Our Strategy

During 2017 the Society drew up our next five year strategic plan and launched a new mission statement "Preventing Extinction". The strategic plan contains six strategic objectives which are:

- Preventing extinction by achieving the greatest conservation impact
- Preventing extinction by being a world class visitor attraction
- Preventing extinction by providing exceptional animal and plant care
- Preventing extinction by ensuring financial stability
- Preventing extinction by developing our people
- Preventing extinction by being a voice for change

Achievements and Performance in 2017

2017 was another tremendously successful year for the North of England Zoological Society as Chester Zoo welcomed 1.9m visitors, just 2% behind the record set in 2016. Membership of the Society continued to increase and at the end of the financial year the Society had just over 94,000 members.

Significant capital investment in the zoo continued as part of the Strategic Development plan which sets out a vision for developing the zoo layout and storyline over the next fifteen years. Projects delivered in 2017 included the completion of three new exhibits within Islands, the creation of new play areas and works to Oakfield house as part of a two phase redevelopment.

Once again the zoo had significant media coverage through Channel 4's the "Secret Life of the Zoo" series and the year round offering was enhanced by "The Enchantment of Chester Zoo" in the autumn and "Lanterns" in December.

During 2017 we drew up a new 5 year strategic plan and developed a more focused mission statement "Preventing Extinction". The ongoing success of Chester zoo has allowed us to continue to increase spend on this mission and within the zoo we continue to breed many species for which there is a conservation need. Amongst 2017's breeding successes were Bornean orang utan, Asian elephant, spectacled bear and a number of species that have never been bred in human care outside their range countries including Bermuda skinks, Montsemy brook newts and Javan green magpies.

Looking to the future, we look to inspire future generations of conservationists and in November and December offered free school visits to 500 children per day, with many of these schools previously unable to visit the zoo due to monetary constraints.

None of this would have been possible without the skills, dedication and passion of our staff and volunteers and the Trustees are grateful for their continuing support in delivering the Society's strategy.

A full review of the Society's achievements and Performance in 2017 can be found in the "Chester Zoo Annual Review" which is published separately and can be downloaded from www.chesterzoo.org.

Equal Opportunities

The Society is an equal opportunities employer and is committed to promoting equal opportunity for all staff and job applicants. The Society has an equal opportunities policy and does not discriminate against staff on the basis of their gender, sexual orientation, marital or civil partner status, gender reassignment, race, colour, nationality, ethnic or national origin, religion or belief, disability or age. This policy applies to all aspects of our relationship with staff and to relations between staff members at all levels. This includes job advertisements, recruitment and selection, training and development, opportunities for promotion, conditions of service, pay and benefits, conduct at work, disciplinary and grievance procedures, and termination of employment.

In March 2018, the Society published its first Gender Pay Gap report relating to April 2017, the results of which highlight the equal opportunities available regardless of gender. Details of the report can be found at www.chesterzoo.org.

TRUSTEES' REPORT FOR THE YEAR ENDED 31 DECEMBER 2017 (CONTINUED)

Public Benefit

The Trustees have complied with the duty in section 4 of the Charities Act 2011 to have due regard to public guidance published by the Charity Commission, including its supplementary guidance on fee charging.

The Society relies on income from admission fees, catering and retail sales and other charges to cover its operating costs and in setting the pricing structure, the Trustees give careful consideration to the accessibility of the zoo to those on low incomes. Coupled with a flexible pricing structure, many visitors enjoy concessionary prices which are set to encourage visits by children, students, families, senior citizens and those with disabilities, with 37,193 receiving free admission in 2017. There were 108,552 concessionary priced education visits in 2017, of which 15,822 received free admission and 20,127 were taught by our education team.

Financial Review 2017

2017 was strong year and, whilst not quite reaching the record levels of 2016, generated income of £41.4m (2016: £42.1m). Total expenditure rose by 4% to £38.5m (2016: £36.9m) resulting in a £2.9m net increase in our funds (2016: £5.2m).

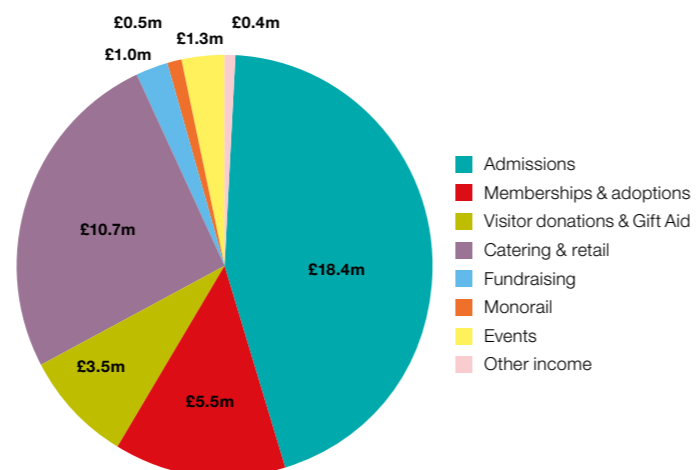
Incoming resources

The bulk of the Society's income comes from the Zoo's visitors and members, in the form of admissions and other charges. Following a record year in 2016, total visitors fell by just under 2% from 1,898,059 in 2016 to 1,866,628 in 2017. Pleasingly, membership numbers increased by 7% to 94,359 during the year and have more than doubled in the last 5 years. Our winter Lanterns event attracted a record number of visitors, and in November we commenced an initiative to provide free school visits during the winter months. Income from charitable activities in 2017, which includes admission was £26.3m (2016: £26.9m).

As a registered charity the Society generates voluntary income from visitor donations, Gift Aid, animal adoptions, grants, legacies and other donations. With slightly lower visitor numbers than the previous year, donations and Gift Aid on admission fell by £0.2m, but this reduction was offset by a £0.5m increase in grants and other donations, including legacies. Total income from donations and legacies was £4.0m (2016: £3.7m).

The Society's trading subsidiary, Chester Zoo Enterprises Limited, which provides retail and food & beverage offerings across the Zoo site had a turnover of £11.0m in 2017 (2016: £11.4m). This performance was impacted by the closure of Oakfield house for redevelopment during the year.

An analysis of the sources of 2017 income is shown in the following chart:



Resources expended

In 2017 we spent £38.5m (2016: £36.9m), excluding capital expenditure.

Resources expended on our charitable activities, including the costs of maintaining the animal and plant collection, the visitor facilities, science and education and our field conservation programmes, together with related support costs totalled £26.8m (2016: £25.7m). In addition we spent £0.2m (2016: £0.2m) generating our voluntary income.

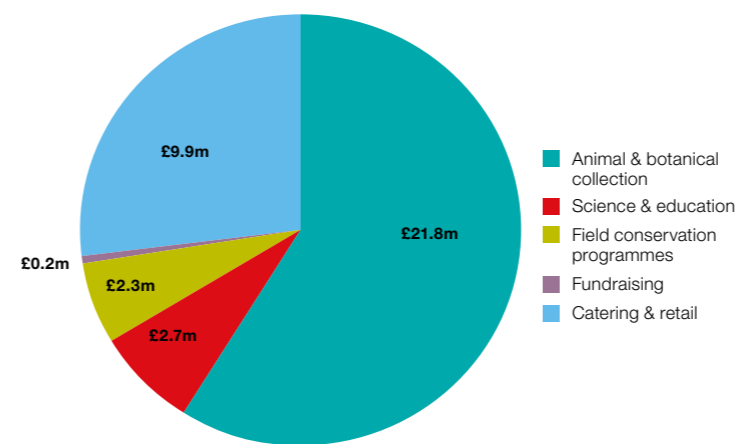
Information on the conservation and research field programmes funded can be found at www.chesterzoo.org and the Society's 2017 Annual Review.

Chester Zoo Enterprises Limited had costs of £9.9m, excluding £0.7m of rent paid to the Society, and it made an operating profit of £0.4m in 2017 (2016: £0.6m) which is donated to the Society.

Costs also include a £1.5m contribution to the closed defined benefit pension scheme (2016: £1.0m). At 31 December 2017, the scheme reported a £5.4m surplus (2016: £2.1m surplus) under Financial Reporting Standard 102. The surplus is not recognised in the financial statements as the Society cannot gain economic benefit from it.

By far the biggest element of expenditure (£14.5m) relates to our employees and the cost has been impacted by both increases in the number of employees and the impact of the national living wage and auto-enrolment pension contributions. Our average Full Time Equivalent (FTE) headcount for 2017 rose to 555 from 545 in 2016. A third of these employees worked directly in support of the Society's charitable objectives, either with our animal & plant collection or in education, science and research. In addition we benefited from the hard work of a team of over 200 passionate volunteers.

The chart below shows an analysis of 2017 expenditure:



Capital expenditure

During 2017 we spent £9.6m on capital expenditure (2016: £5.3m). Cash generated from operations of £8.9m (2016: £11.3m), together with a small increase in borrowings, was used to fund this expenditure.

The expenditure included the purchase of Woodside Farm, a 108 acre farm to the north of the zoo estate which will be used to support future zoo operations. We completed development of a new habitat at Islands for our Malayan Tapirs and Sun Bears, made improvements to our visitor car parks, opened our new Madagascar Play! area and funded roadworks close to the entrance to the zoo. Ahead of the year end we commenced redevelopment of the Penguin Island habitat which opened in February 2018 and the second phase of redevelopment of Oakfield house which will re-open in summer 2018.

Borrowings, investments and reserves

It is the general policy of the Society to apply towards its charitable objectives as much cash as it reasonably can, to avoid accumulating excessive reserves. Where considered appropriate and being mindful not to overcommit the Charity, borrowings are undertaken to fund elements of significant capital projects.

In setting its reserves policy the Society takes account of its continuing financial commitments in terms of staffing and overheads including the costs of maintaining the animal and plant collection and funding its charitable activities. The Society also considers the risk that its income for any particular year may be impacted by a number of factors outside the Society's control such as periods of prolonged wet weather at peak visitor times, competition from other visitor attractions, social trends, varying levels of economic prosperity and employment, alongside the potential for closure of the zoo to visitors due to the outbreak of contagious disease.

Having considered these factors, the Society maintains minimum available cash reserves of £1.5m at all times which are supplemented by a minimum £0.5m of undrawn committed borrowing facilities. Such reserves would be sufficient for the zoo to operate without significant curtailment of its activities for a period of up to one month.

At the end of 2017 the Society had borrowed £6.0m and had £2.0m of cash reserves. The Society's borrowing facility comprises a £15m unsecured revolving credit facility, which is in place until July 2019 and

a £2.0m overdraft facility which is renewable annually. At 31 December 2017 the Society had access to £11m of undrawn borrowings and £2.0m of cash reserves.

Pensions

The Society's defined benefit pension scheme was closed to future accrual in 2012 and, as part of an ongoing solvency deficit reduction plan, the Society made an additional cash contribution of £1.5m to the scheme in 2017. At 31 December 2017 the Scheme had a surplus of £5.4m (2016: £2.1m) as accounted for under FRS102. However this is not recognised in the financial statements as the Society is not entitled to a refund of any surplus at the present time.

The Society now operates a defined contribution scheme which is open to all employees. For permanent employees who contribute 3% or more, the Society makes a contribution that is 2% more than the employee contribution up to a maximum of 9%. Qualifying seasonal employees are paid a matched 1% contribution into a NEST pension scheme.

Restricted and Designated Funds

Restricted income funds derive from donations, grants and legacies received and are put towards a variety of capital projects and conservation activities. Unrestricted income funds may be designated or freely available for the Society's general charitable purpose.

After setting aside restricted income funds the balance of the Society's available funds at the balance sheet date are designated as follows:

- to charitable activities which the Society intends to support over the coming year.
- to capital expenditure that is either contractually committed or is planned for the coming financial year; then
- to funds that could only be realised by disposing of fixed assets held for charitable use, up to a maximum of the net book value of those fixed assets at the balance sheet date.

If, after designating unrestricted funds as above, there are funds remaining, these are treated as unrestricted free 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.

At 31 December 2017 the Society had total funds employed of £47.6m (2016: £44.8m) of which £1.1m (2016: £0.6m) were restricted and the balance of £46.5m (2016: £44.2m) were designated, including £42.5m (2016: £39.9m) tied to fixed assets. The increase in the amount tied to fixed assets reflects the impact of the acquisition of Woodside Farm, development of three new habitats within Islands, improvements to visitor car parks and works to Oakfield house. There were no unrestricted free reserves (2016: nil).

Plans for Future Periods

2017 was the start of another period of change within the zoo and in 2018 we will continue to evolve the zoo layout through delivery of the Strategic Development Plan. As part of this plan a Madagascan forest is currently being developed which will provide an immersive walk allowing visitors to get close to the zoo's lemurs whilst Oakfield house is undergoing the second phase of redevelopment and will open as a 150 cover gastro pub in the summer.

TRUSTEES' REPORT FOR THE YEAR ENDED 31 DECEMBER 2017 (CONTINUED)

Principal Risks and Uncertainties

The Trustees have set a risk management strategy which sets out responsibilities for risk management across the Society, the Society's risk appetite, a process for reporting, review and escalation in relation to identified risks and links to the internal control environment and external legal frameworks.

The Trustees actively review the major risks that the Society faces on a regular basis against the relevant mitigating internal controls and believe that maintaining cash reserves within defined levels, alongside appropriate insurances will provide sufficient resources in the event of most adverse conditions.

The key risks identified by the Trustees are:

- Protection of the Society's assets including its reserves and the wider zoo estate, which is addressed through having an appropriate governance structure, relevant insurances and regular audit and review;
- A major operational issue impacting public safety and causing reputational damage which is addressed through documented operational procedures and which are regularly tested, health & safety training and routine checks, external audit and advice; and
- Failure to recruit, manage and retain a skilled workforce which is managed through the induction process, performance development plans, succession planning, agreement of a fair pay structure with employees and investment in training.

The effectiveness of the Society's risk assessment procedures are reviewed by the Audit & Risk Management Committee. The Society's internal auditors undertake a schedule of internal audits determined and scoped by the Audit & Risk Management Committee and report back to the committee on a regular basis. The internal auditors also provide advice and guidance on the Society's overall risk management process.

Structure, Governance and Management

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 distributed to the Society via Gift Aid.

Chester Zoo Foundation Nigeria ("CZFN"), an unlimited company (registered in England, no. 08904330) is a wholly owned subsidiary of Chester Zoo (Nigeria) Limited ("CZNL"), a limited company (registered in England, no. 08374657) and a wholly-owned subsidiary of the Society. Both CZNL and CZFN facilitate the management of the Society's conservation activities in Nigeria.

The Society is also the sole member of the North of England Zoological Society Pension Trustee Company Limited, a company limited by guarantee (registered in England, no. 9173532) which provides governance of the Society's two pension schemes.

Trustees and Governance

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 Chief Executive Officer and Chief Operating Officer of the Society as Principal Executives and their teams who implement these policies.

The number of Trustees shall be not less than three and not more than sixteen of whom not more than thirteen shall be Elected Trustees and not more than three shall be Co-opted Trustees. Elected Trustees, who must be members of the Society, are elected by the members at the Annual General Meeting to serve for a maximum of six years. Co-opted Trustees are co-opted by the Trustees and may serve for up to fifteen months from being appointed. The Trustees hold at least six formal meetings each year, together with an Annual General Meeting. The Chairman and Vice Chairmen 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. They are not required to retire as Trustees in accordance with the six year maximum in this circumstance.

During 2017 three long standing Trustees, Rebecca Burke-Sharples, Peter Wheeler and Tony Williams stepped down. All had held the position of Chair or Vice Chair during a period of considerable change and the Society has been fortunate to have had the benefit of their expertise.

Key Responsibilities of the Trustees

To manage the business of the Society and to hold the Society "in trust" for current and future beneficiaries by:

- ensuring that the Society has a clear vision, mission and strategic direction and is focused on achieving these;
- being responsible for the performance of the Society, its employees and for its "corporate" behaviour;
- ensuring that the Society complies with legal and regulatory requirements;
- acting as guardians of the Society's assets, both tangible and intangible, taking all due care over their security, deployment and proper application; and
- ensuring that the Society's governance is of the highest possible standard.

Trustee Committees

In 2017, Trustees delegated aspects of their powers to committees consisting of some of their members and specialist advisors. These committees report to the Trustees.

Ethical Review Committee – prime responsibility for advising the Executive of the Society, on behalf of the Trustees, in respect of all research and ethics, and to oversee the ethical activities of the Society in so far as they relate to the advancement of the Society's stated mission.

Audit & Risk Management Committee – prime responsibility to review the effectiveness and integrity of systems for internal financial control, risk assessment procedures, information technology security, procedures for detecting fraud, appointment of a senior finance team,

appointment of external and internal auditors and review of audit findings and to investigate, on behalf of the Trustees, any financial and administrative matter which may put the charity at risk.

Remuneration Committee – determines remuneration and conditions of service for principal executives.

Trustee Nominations Committee – takes responsibility for identifying and proposing new Trustees, and (if elected) for their subsequent induction, support and development.

Strategic Development Committee – responsible for ensuring that the Strategic Development Plan (SDP) is implemented in accordance with the strategy set out by Trustees. Monitors progress, scrutinises and makes decisions in respect of individual strategic capital projects in respect of the overall SDP with regard to quality, cost and overall programme. Makes recommendations to the Board of Trustees for any issues of significance in respect of the SDP and its implementation.

Trustee involvement in each committee at 31 December 2017 is set out in the table below:

Committees	Ethical Review	Audit and Risk Management	Remuneration	Trustee Nominations	Strategic Development
Bruce Ursell			Chair	Chair	x
Malcolm Ardron			x	x	Chair
William Beale			x	x	x
Catherine Buckley	x				
Edwin Christmas					
Penny Coates					x
Sandra Donnelly					
Prof Russell Newton	Chair	x			
Angela Pinnington	x	x			
Paula Spence					
Simon Venables		Chair			

Trustees – Recruitment

If there are vacancies in any year, the Nomination Committee prepares a list of names of members of the Society that they recommend for election to the Trustee board at the Annual General meeting. Such recommendations are made having regard to the maintenance of an appropriate mix of skills on the Trustee Board to ensure adequate management of the zoo and protection of the Society's assets.

Trustees' Training

The relationship between the executive and the Trustees is fundamental to the Society's 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 required to complete an induction tour of

the zoo's various divisions, and to discuss with the executive team the role and function of each division, and the part it plays in the fulfilment of the Society's mission.

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. All Trustees are encouraged to attend appropriate external training courses, covering 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 employees which provides appropriate cover against claimants' damages, judgements, settlements or the costs incurred in the defence of actions.

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' Annual Report (including the Strategic Report) and the financial statements in accordance with applicable law and regulation. 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 Accounting Standards, comprising FRS 102 "The Financial Reporting Standard applicable in the UK and Republic of Ireland", and applicable law (United Kingdom Generally Accepted Accounting Practice). 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 the affairs of the charitable company and the group and of the incoming resources and application of resources, including the income and expenditure, of the charitable group 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 Statement of Recommended Practice: Accounting and Reporting by Charities (2015);
- make judgments and estimates that are reasonable and prudent;
- state whether applicable UK Accounting Standards, comprising FRS 102, have been followed, subject to any material departures disclosed and explained in the financial statements; and
- prepare the financial statements on the going concern basis unless it is inappropriate to presume that the charitable 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 the group 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 the group and hence for taking reasonable steps for the prevention and detection of fraud and other irregularities.

TRUSTEES' REPORT FOR THE YEAR ENDED 31 DECEMBER 2017 (CONTINUED)

INDEPENDENT AUDITOR'S REPORT TO THE MEMBERS OF THE NORTH OF ENGLAND ZOOLOGICAL SOCIETY

Disclosure of Information to Auditor

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 auditor is 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 auditor is aware of that information.

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

Independent Auditor

In 2017, the Trustees reviewed the Society's auditors and following a resolution at the Annual General Meeting, re-appointed PricewaterhouseCoopers LLP.

The Strategic Report on pages 3 to 8 was approved by the Trustees on the 11 May 2018 and signed on their behalf by:

Bruce Ursell
Chairman of Trustees

Report on the audit of the financial statements

Opinion

In our opinion, The North of England Zoological Society's group financial statements and parent charitable company financial statements (the "financial statements"):

- give a true and fair view of the state of the group's and of the parent charitable company's affairs as at 31 December 2017 and of the group's incoming resources and application of resources, including its income and expenditure, and of the group's cash flows, for the year then ended;
- have been properly prepared in accordance with United Kingdom Generally Accepted Accounting Practice (United Kingdom Accounting Standards, comprising FRS 102 "The Financial Reporting Standard applicable in the UK and Republic of Ireland", and applicable law); and
- have been prepared in accordance with the requirements of the Companies Act 2006.

We have audited the financial statements, included within the Trustees' Report and Financial Statements (the "Annual Report"), which comprise: the consolidated and society balance sheets as at 31 December 2017; the consolidated statement of financial activities and the consolidated cash flow statement for the year then ended; the accounting policies; and the notes to the financial statements.

Basis for opinion

We conducted our audit in accordance with International Standards on Auditing (UK) ("ISAs (UK)") and applicable law. Our responsibilities under ISAs (UK) are further described in the Auditors' responsibilities for the audit of the financial statements section of our report. We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our opinion.

Independence

We remained independent of the charitable company in accordance with the ethical requirements that are relevant to our audit of the financial statements in the UK, which includes the FRC's Ethical Standard and we have fulfilled our other ethical responsibilities in accordance with these requirements.

Conclusions relating to going concern

We have nothing to report in respect of the following matters in relation to which ISAs (UK) require us to report to you when:

- the trustees' use of the going concern basis of accounting in the preparation of the financial statements is not appropriate; or
- the trustees have not disclosed in the financial statements any identified material uncertainties that may cast significant doubt about the group's and parent charitable company's ability to continue to adopt the going concern basis of accounting for a period of at least twelve months from the date when the financial statements are authorised for issue.

However, because not all future events or conditions can be predicted, this statement is not a guarantee as to the group's and parent charitable company's ability to continue as a going concern.

Reporting on other information

The other information comprises all of the information in the Trustees' Report and Financial Statements other than the financial statements and our auditors' report thereon. The trustees are responsible for the other information. Our opinion on the financial statements does not cover the other information and, accordingly, we do not express an audit opinion or, except to the extent otherwise explicitly stated in this report, any form of assurance thereon.

In connection with our audit of the financial statements, our responsibility is to read the other information and, in doing so, consider whether the other information is materially inconsistent with the financial statements or our knowledge obtained in the audit, or otherwise appears to be materially misstated. If we identify an apparent material inconsistency or material misstatement, we are required to perform procedures to conclude whether there is a material misstatement of the financial statements or a material misstatement of the other information. If, based on the work we have performed, we conclude that there is a material misstatement of this other information, we are required to report that fact. We have nothing to report based on these responsibilities.

Based on the responsibilities described above and our work undertaken in the course of the audit, ISAs (UK) require us also to report certain opinions and matters as described below.

Strategic Report and Trustees' Annual Report

In our opinion, based on the work undertaken in the course of the audit, the information given in the Trustees' Annual Report, including the Strategic Report, for the financial year for which the financial statements are prepared is consistent with the financial statements; and the Strategic Report and the Trustees' Annual Report have been prepared in accordance with applicable legal requirements.

In addition, in light of the knowledge and understanding of the group and parent charitable company and their environment obtained in the course of the audit, we are required to report if we have identified any material misstatements in the Strategic Report and the Trustees' Annual Report. We have nothing to report in this respect.

Responsibilities for the financial statements and the audit

Responsibilities of the trustees for the financial statements

As explained more fully in the Statement Trustees' Responsibilities, the trustees are responsible for the preparation of the financial statements in accordance with the applicable framework and for being satisfied that they give a true and fair view. The trustees are also responsible for such internal control as they determine is necessary to enable the preparation of financial statements that are free from material misstatement, whether due to fraud or error.

In preparing the financial statements, the trustees are responsible for assessing the group's and parent charitable company's ability to continue as a going concern, disclosing as applicable, matters related to going concern and using the going concern basis of accounting unless the trustees either intend to liquidate the group and parent charitable company or to cease operations, or have no realistic alternative but to do so.

INDEPENDENT AUDITOR'S REPORT TO THE MEMBERS OF THE NORTH OF ENGLAND ZOOLOGICAL SOCIETY (CONTINUED)

CONSOLIDATED STATEMENT OF FINANCIAL ACTIVITIES

(Including a consolidated income and expenditure account) for the year ended 31 December 2017

Auditors' responsibilities for the audit of the financial statements

Our objectives are to obtain reasonable assurance about whether the financial statements as a whole are free from material misstatement, whether due to fraud or error, and to issue an auditors' report that includes our opinion. Reasonable assurance is a high level of assurance, but is not a guarantee that an audit conducted in accordance with ISAs (UK) will always detect a material misstatement when it exists. Misstatements can arise from fraud or error and are considered material if, individually or in the aggregate, they could reasonably be expected to influence the economic decisions of users taken on the basis of these financial statements.

A further description of our responsibilities for the audit of the financial statements is located on the Financial Reporting Council's website at: www.frc.org.uk/auditorsresponsibilities. This description forms part of our auditors' report.

Use of this report

This report, including the opinions, has been prepared for and only for the charity'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 these opinions, 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.

Other required reporting

Companies Act 2006 exception reporting

Under the Companies Act 2006 we are required to report to you if, in our opinion:

- we have not received all the information and explanations we require for our audit; or
- adequate accounting records have not been kept by the parent charitable company or returns adequate for our audit have not been received from branches not visited by us; or
- certain disclosures of trustees' remuneration specified by law are not made; or
- the parent charitable company financial statements are not in agreement with the accounting records and returns.

We have no exceptions to report arising from this responsibility.

Nicholas Boden (Senior Statutory Auditor)
for and on behalf of PricewaterhouseCoopers LLP
Chartered Accountants and Statutory Auditors
Manchester
11 May 2018

	Notes	Unrestricted Funds £'000	Restricted Funds £'000	Total 2017 £'000	Total 2016 £'000
Income from:					
Charitable activities					
Animals and botanical collection	2	26,302	-	26,302	26,867
Donations and Legacies					
Voluntary income	3	3,306	728	4,034	3,744
Other trading activities					
Subsidiary's trading turnover	4	11,013	-	11,013	11,429
Investments					
Investment income	5	5	-	5	12
Total income		40,626	728	41,354	42,052
Expenditure on:					
Charitable activities					
Animals and botanical collection	6a	(21,717)	(52)	(21,769)	(21,539)
Science and education	6a	(2,560)	(141)	(2,701)	(2,171)
Conservation programmes	6a	(2,174)	(122)	(2,296)	(1,945)
Raising funds					
Costs of generating voluntary income	6a	(207)	-	(207)	(180)
Subsidiary's cost of goods sold and other costs	4	(9,943)	-	(9,943)	(10,064)
Total expenditure		(36,601)	(315)	(36,916)	(35,899)
Net income		4,025	413	4,438	6,153
Other gains and losses					
Contribution made to defined benefit scheme	21	(1,556)	-	(1,556)	(1,000)
Net movement in funds		2,469	413	2,882	5,153
Reconciliation of funds					
	17				
Total funds brought forward		44,144	615	44,759	39,606
Total funds carried forward		46,613	1,028	47,641	44,759

The North of England Zoological Society made an unconsolidated surplus of £2,506,077 (2016: £4,506,465). The above results are all in respect of continuing operations.

No Statement of Changes in Equity has been presented as all such gains and losses have been included above.

CONSOLIDATED & SOCIETY BALANCE SHEETS AS AT 31 DECEMBER 2017

	Notes	Consolidated		Society	
		2017 £'000	2016 £'000	2017 £'000	2016 £'000
Fixed Assets					
Tangible assets	11	56,216	52,717	56,216	52,717
Investment in subsidiary companies	12	-	-	-	-
		56,216	52,717	56,216	52,717
Current assets					
Stocks	13	704	687	65	70
Debtors	14	812	1,074	1,201	1,400
Cash at bank and in hand		1,963	2,047	1,963	2,047
		3,479	3,808	3,229	3,517
Creditors: amounts falling due within one year	15	(6,204)	(6,516)	(5,955)	(6,219)
Net current liabilities		(2,725)	(2,708)	(2,726)	(2,702)
Total assets less current liabilities		53,491	50,009	53,490	50,015
Creditors: amounts falling due after more than one year	16	(5,850)	(5,250)	(5,850)	(5,250)
Net assets		47,641	44,759	47,640	44,765
Funds Employed					
Income funds – restricted	17	1,028	615	1,028	615
Income funds - unrestricted					
Designated funds	17	46,613	44,144	46,612	44,150
Total funds employed		47,641	44,759	48,159	44,765

The notes on pages 16 to 28 form part of these financial statements.

The financial statements were approved and authorised by the Trustees on the 11 May 2018 and signed on their behalf by:

Bruce Ursell
Chairman of Trustees

Company number – 287902 – North of England Zoological Society

CONSOLIDATED CASH FLOW STATEMENT FOR THE YEAR ENDED 31 DECEMBER 2017

	2017 £'000	2016 £'000
Cash flows from operating activities:		
Net movement in funds as per the Statement of Financial Activities	4,438	6,153
Adjustments for:		
Interest paid	165	207
Interest received	(5)	(12)
Depreciation charge	6,121	5,936
Increase in stocks	(18)	(101)
Decrease in debtors	262	(291)
Increase in creditors due within one year	(483)	455
Difference between pension charge and cash contributions	(1,556)	(1,000)
Net cash provided by operating activities	8,924	11,347
Cash flows from investing activities:		
Interest received	5	12
Purchase of fixed assets	(9,620)	(5,296)
Net cash used in investing activities	(9,615)	(5,284)
Cash flow from financing activities:		
Cash inflows from new borrowing/(outflows to repay borrowing)	600	(6,050)
Interest paid	(165)	(207)
Net cash provided by financing activities	435	(6,257)
Operating cash outflow in year	(256)	(194)
Management of liquid resources		
Increase/(decrease) in short term investments	-	-
Decrease in net cash at bank in the year	(256)	(194)
Cash and cash equivalents at 1 January	2,047	2,241
Cash and cash equivalents at 31 December	1,791	2,047

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 financial statements comply with the Charities Act 2011, the Companies Act 2006, the Memorandum and Articles of Association, and Accounting and Reporting by Charities: Statement of Recommended Practice 2015 ("SORP") applicable to charities preparing their financial statements in accordance with the Financial Reporting Standard applicable in the UK and Republic of Ireland (FRS102).

The Society's activities, together with the factors likely to affect its future development, performance and position are set out in the Trustees' report. The financial position of the Society and its subsidiary, its cash flows and liquidity position are shown in these financial statements. There are no significant estimates or matters of uncertainty in the financial statements. The Trustees report also notes the principal risks and uncertainties that impact on the Society.

The Society has a history of generating an annual surplus and has a balance sheet showing significant reserves. As a consequence the Trustees believe that the Society is well placed to manage its risks successfully and taking into consideration the current economic conditions.

The Trustees have a reasonable expectation that the Society and its subsidiary companies have adequate resources to continue in operational existence for the foreseeable future. Accordingly, they continue to adopt the going concern basis in preparing the financial statements.

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 undertakings, Chester Zoo Enterprises Limited, Chester Zoo (Nigeria) Limited, Chester Zoo Foundation Nigeria and the North of England Zoological Society Pension Trustee Company Limited made up to 31 December 2017 and comply with recommended practice for accounting by charities. The results of the subsidiaries are consolidated on a line by line basis. The charity has 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 objectives of the Society. Restricted income funds must be used in furtherance of some specific aspect of those objectives.

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 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 allocated. Income, both unrestricted and restricted, is recognised at the time of receipt except where it relates to a service to be provided in the following financial year. Such income is deferred and released over the period the service is provided. An example of this is the treatment of annual membership income.

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, or where there has been a grant of probate and the executors have established that there are sufficient assets in the estate after meeting its liabilities to pay the legacy. Grants are recognised when there is entitlement, conditions have been met and there is certainty of receipt.

Resources Expended

Expenditure is recognised when a liability is incurred. In accordance with the new SORP, support costs have been allocated to charitable activities and fundraising, apportioned by usage according to relative cost driving activities. Support costs now also include governance costs as a separate component in line with the new SORP.

VAT

Visitor admission income is treated as VAT exempt. Accordingly the Society is a partially exempt body and may not recover all VAT incurred on costs, with the exception of VAT incurred in connection with the catering, retail, and event operations for which the sales are subject to VAT. These operate through the trading subsidiary Chester Zoo Enterprises Limited and the VAT directly related to these operations can be recovered in full. The cost of irrecoverable VAT is apportioned in the SOFA under other resources expended. Any irrecoverable VAT relating to the purchase of fixed assets is capitalised as part of the asset value.

Taxation

The Society is considered to pass the tests set out in Paragraph 1 Schedule 6 Finance Act 2010 and therefore it meets the definition of a charitable company for UK corporation tax purposes. Accordingly, the charity is potentially exempt from taxation in respect of income or capital gains received within categories covered by Chapter 3 Part 11 Corporation Tax Act 2010 or Section 256 of the Taxation of Chargeable Gains Act 1992, to the extent that such income or gains are applied exclusively to charitable purposes.

Investments in Subsidiary Undertakings

These are included at cost less any provision for impairment.

Fixed Assets

These are included in the balance sheet at historic purchase cost less accumulated depreciation. Assets in the course of construction are stated at cost, less any recognised impairment loss.

Depreciation

The rates and method of depreciation are consistent with those used in previous years. Depreciation is calculated using a straight line basis. Freehold land is not depreciated and assets in the course of construction are only depreciated when the assets are ready for their intended use.

Asset Class	Rate of Depreciation Applied
Freehold Properties	2% to 10%
Buildings and Enclosures	4% to 25%
Machinery and Equipment	10% to 25%

No annual assessment is made of the value of the animal and plant collection. It is valued consistently at a nominal sum of £1,000 and not depreciated.

Impairment

The carrying amounts of assets are reassessed when impairment indicators are present. An impairment loss is recognised to the extent the carrying amount of an asset exceeds its estimated recoverable amount.

Leases

All leases currently held by the Society are operating leases and the rental charges are taken as expenditure when incurred. The Society has not entered into any finance leases.

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.

The Society makes contributions to a defined contribution pension scheme for all qualifying permanent employees and to the NEST scheme for all qualifying seasonal employees. Employees are automatically enrolled on the pension scheme unless the Society is notified by the employee that they wish to opt out. The cost of these contributions is charged to the Statement of Financial Activities ("SOFA") when payable.

The defined benefit scheme was closed to future accrual in March 2012. A minimum deficit reduction payment will be made to the scheme annually in order to reduce the scheme's solvency deficit over time. This payment is recognised within actuarial gains and losses in the net movement in funds in the SOFA.

To the extent that the scheme is in surplus on a technical provisions basis, the Society does not recognise this in the financial statements as the Society is unable to recover any surplus either through reduced contributions in the future or through refunds from the scheme.

Grant-making

The Society supports a wide range of conservation and research activities both in the zoo and externally, often in partnership with other organisations. This support may be ongoing with our major conservation programmes. One-off annual grants including scholarships are also awarded.

Criteria for our funding support for projects include feasibility; qualification of project personnel; capacity building; benefits to local communities; relevance to other conservation initiatives of the zoo and regions or countries where the zoo already has a field conservation focus; links to species within the collection plan; opportunities for technical support from zoo employees.

Primarily support is provided to those projects which are judged to have potential to make a significant positive conservation impact. Applications are requested to be made on our standard grant application forms and these are reviewed internally against standardised criteria before a funding decision is made.

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

Related Party Transactions

Details of transactions with entities that are part of The North of England Zoological Society group are disclosed in the notes to the financial statements.

NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

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.

2. Income from Charitable Activities

	Unrestricted Funds			Total 2017 £'000	Total 2016 £'000
	Visitor Related £'000	Other unrestricted £'000	Other designated £'000		
Animals and botanical collection					
Visitor admission to zoo and gardens	18,361	-	-	18,361	19,779
Monorail and boats	574	-	-	524	572
Membership of zoo and Gift Aid thereon	5,983	-	-	5,983	5,389
Events	989	-	-	989	716
Other	445	-	-	445	631
Total incoming resources from charitable activities	26,302	-	-	26,302	26,867

3. Income from Donations and Legacies

	Unrestricted 2017 £'000	Restricted 2017 £'000	Total 2017 £'000	Total 2016 £'000
Donations and Gift Aid on admission to zoo	2,755	-	2,755	2,946
Animal Adoptions	264	-	264	276
Grants and Other Donations	287	728	1,015	522
Total voluntary income	3,306	728	4,034	3,744

The restricted income funds derive from certain donations, grants and legacies received and are put towards a variety of capital projects, equipment or outreach activities.

4. Other Trading Activities

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, retail and event activities of the Zoo from outlets rented from the Society. It distributes its taxable profit via Gift Aid to the Society. A summary of its trading results is shown below.

Audited financial statements for Chester Zoo Enterprises Limited for the year ended 31 December 2017 will be filed with the Registrar of Companies.

Chester Zoo Enterprises Limited trading results	Total 2017 £'000	Total 2016 £'000
Turnover	11,013	11,429
Resources expended		
Labour and cost of goods sold	(7,423)	(7,554)
Gross trading surplus for year	3,590	3,875
Indirect costs		
Operating and support costs paid to Society	(2,520)	(2,511)
Property rents paid to Society	(695)	(718)
Operating profit	375	646
Taxation	-	-
Profit for the financial year	375	646
Gift Aid donation to parent company	(375)	(646)
Surplus/(deficit) retained in subsidiary	-	-

5. Interest income

	Total 2017 £'000	Total 2016 £'000
Interest on cash deposits	5	12
Total interest income	5	12

NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS (CONTINUED)

6a. Analysis of Total Expenditure

	Employee Costs £'000	Other Direct Costs £'000	Support Costs (Note 6b) £'000	Total 2017 £'000	Total 2016 £'000
Charitable activities					
Animals and botanical collection	5,949	11,206	4,614	21,769	21,539
Science and education	1,348	660	693	2,701	2,172
Conservation programmes	437	1,274	585	2,296	1,944
Total for Society	7,734	13,140	5,892	26,766	25,655
Raising Funds					
Costs of generating voluntary income	91	54	62	207	180
Total for Society	91	54	62	207	180
Subsidiary's cost of goods sold and other costs	3,163	4,260	2,520	9,943	10,064
Total for Society	7,825	13,194	5,954	26,973	25,835
Total expenditure for Group	10,988	17,454	8,474	36,916	35,899

6b. Analysis of Support Costs

	Total 2017 £'000	Total 2016 £'000
Direct Employee	3,730	3,301
Other Costs	4,744	4,977
Total of support costs	8,474	8,278

6b. Analysis of Support Costs (continued)

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	Science and Education £'000	Conservation Programmes £'000	Generating voluntary income £'000	Subsidiary £'000	Total 2017 £'000	Total 2016 £'000
Governance	254	12	4	13	-	283	272
Human Resources	503	92	78	6	338	1,017	990
Information Technology	473	86	73	6	318	956	771
Directorate and Central Services	336	61	52	5	226	680	561
Finance Department	957	174	149	13	644	1,936	1,730
Security and Site operations	289	53	45	4	194	585	581
Maintenance Department	1,187	216	184	15	799	2,401	2,576
Estates and Project Planning	615	-	-	-	-	615	797
Total	4,614	694	585	62	2,519	8,474	8,278

7. Grants Payable in Furtherance of the Charity's Objectives

The Society makes institutional grants payable in furtherance of the charity's objects, to support field and zoo conservation and research. The grants have been included in the other direct costs analysis of total resources expended within the Statement of Financial Activities.

	Grants to institutions £'000	Grants to individuals £'000	Total 2017 £'000	Total 2016 £'000
Conservation programmes	857	-	857	734
Science and education	26	10	36	36
Other	-	-	-	23
Total grants payable	883	10	893	793

NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS (CONTINUED)

8. Net Income before other Recognised Gains and Losses

This is after charging:	Total 2017 £'000	Total 2016 £'000
Services provided by the Society's auditor		
Fees payable for the audit of the charity and consolidated accounts	17	17
Fees payable for the audit of the subsidiaries	6	6
Fees payable for taxation advice for the charity	-	-
Fees payable for taxation advice for the subsidiary	5	5
Operating Leases	68	60
Depreciation of tangible fixed assets	6,121	5,936

9. Trustees' Remuneration

The Trustees, being charity Trustees, received no remuneration (2016: nil) but received reimbursement totalling £1,376 (2016: £1,430) during the year for travel and accommodation expenses necessarily incurred. Indemnity insurance costing £13,638 (2016: £12,750) has been taken out by the Society to protect the Society, its Trustees and other employees.

10. Employee costs

The average monthly headcount employed by the Society during the year was 716 (2016: 690) including seasonal employees. The average monthly number of full-time equivalent employees (FTE) analysed by category were as follows:

	Number of FTE employees	
	2017 Number	2016 Number
Animals and botanical collection	128	135
Science and education	45	31
Conservation programmes	10	10
Fundraising	3	3
Trading subsidiary	156	162
Guest Experience	92	90
Site Operations	55	54
Support and Governance	66	60
Total FTE employees	555	545

The aggregate payroll costs of these persons were as follows:

	Total 2017 £'000	Total 2016 £'000
Wages and salaries cost	12,618	12,006
Social security cost	981	920
Pension cost:		
Defined benefit pension scheme	-	-
Defined contribution pension scheme	946	909
Total employee costs	14,545	13,835

10. Employee costs (continued)

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. All of these employees had benefits accruing to them under the defined contribution pension scheme. Only two had benefits accruing to them on the defined benefit scheme. Contributions to the defined contribution scheme for all of these employees totalled £112,878 (2015: £63,000).

	2017 Number	2016 Number
From £110,001 to £120,000	1	-
From £100,001 to £110,000	-	2
From £90,001 to £100,000	-	1
From £80,001 to £90,000	-	-
From £70,001 to £80,000	1	-
From £60,001 to £70,000	3	1

The key management personnel employed by the Society comprise the five members of the executive team during the year. Their total employee benefits for 2017, including pension contributions, were £503,550 (2016: £651,486).

NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS (CONTINUED)

11. Tangible Fixed Assets for the Group and Society

	Assets in the course of construction £'000	Freehold Property £'000	Buildings and enclosures £'000	Machinery and equipment £'000	Animals and plant collection £'000	Total £'000
Cost						
At 1 January 2017	2,587	3,791	68,063	12,346	1	86,788
Additions	1,255	1,235	6,569	561	-	9,620
Disposals and Transfers	(2,587)	-	2,369	218	-	-
At 31 December 2017	1,255	5,026	77,001	13,125	1	96,408
Depreciation						
At 1 January 2017	-	2,777	28,336	2,958	-	34,071
Charge for the year	-	21	4,758	1,342	-	6,121
At 31 December 2017	-	2,798	33,094	4,300	-	40,192
Net book value						
At 31 December 2017	1,255	2,228	43,907	8,825	1	56,216
At 31 December 2016	2,587	1,014	39,727	9,388	1	52,717

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.

The Trustees consider that it is not meaningful to consider the market value of most of the Society's land and buildings. Where an assessment can be made, the Trustees consider that the market value exceeds the book value.

All the tangible fixed assets included in the consolidated statement above relate entirely to the Society.

The Society considers that none of its assets meet the definition of heritage assets under FRS102. Although certain assets may have a heritage quality, these are all used for operational purposes in the running of the zoo and are therefore classified as operating assets.

12. Investments

	2017 £	2016 £
Investment in Chester Zoo Enterprises Limited	100	100
Investment in Chester Zoo (Nigeria) Limited	1	1
North of England Zoological Society Pension Trustee Company Limited	1	1

The principal undertakings in which the Society's interest at the year end is more than 20% are as follows:

Subsidiary undertakings	Company Number	Country of incorporation	Principal activity	Class and percentage of shares held	
				Group	Company
Chester Zoo Enterprises Ltd	2669535	UK	Catering and Retail	100% ordinary	100% ordinary
Chester Zoo (Nigeria) Ltd	08374657	UK	Protecting the biodiversity of Nigeria	100% ordinary	100% ordinary
Chester Zoo Foundation Nigeria	08904330	UK	Protecting the biodiversity of Nigeria. Wholly owned by Chester Zoo (Nigeria) Limited	100% ordinary	-

All the above undertakings are registered at Cedar House or Oakfield House, Caughall Road, Upton-by-Chester, Chester, CH2 1LH

13. Stocks

	Group		Society	
	2017 £'000	2016 £'000	2017 £'000	2016 £'000
Goods for resale	640	617	-	-
Consumables	65	70	65	70
Total	705	687	65	70

14. Debtors: Amounts Falling Due Within One Year

	Group		Society	
	2017 £'000	2016 £'000	2017 £'000	2016 £'000
Trade debtors	187	99	161	68
Amount owed by subsidiary undertaking	-	-	415	357
Other debtors	17	16	17	16
VAT recoverable	-	74	-	74
Prepayments and accrued income	608	885	608	885
Total	812	1,074	1,201	1,400

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

NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS (CONTINUED)

15. Creditors: Amounts Falling Due Within One Year

	Group		Society	
	2017 £'000	2016 £'000	2017 £'000	2016 £'000
Bank overdraft	171	-	171	-
Trade creditors	1,255	2,164	1,006	1,867
Other taxes and social security costs	350	332	350	332
Accruals	2,208	1,630	2,208	1,630
VAT payable	42	-	42	-
Other creditors	198	271	198	271
Deferred income	1,980	2,119	1,980	2,119
Total	6,204	6,516	5,955	6,219

16. Creditors: Amounts Falling Due After More Than One Year

	Group		Society	
	2017 £'000	2016 £'000	2017 £'000	2016 £'000
Revolving credit facility	5,850	5,250	5,850	5,250
Total	5,850	5,250	5,850	5,250

An unsecured £15m revolving credit facility was taken out with Santander in November 2013 and will expire in July 2019 where upon it must be repaid in full. As part of compliance to the terms of the facility, the Society is obliged to meet two covenants. These are:

- (i) Interest cover – EBITDA must be at least four times the interest payable; and
- (ii) Leverage – Net debt must not exceed three times EBITDA.

As at the 31 December 2017 the Society was fully compliant with these covenants and anticipates complying with the covenants for the duration of the facility.

17. Movement in Consolidated Funds

	Balance at 31 Dec 2016 £'000	New funds £'000	Funds utilised £'000	Transfers £'000	Balance at 31 Dec 2017 £'000
Restricted income funds					
Animal collection	146	233	(57)	-	322
Education	204	52	(105)	-	151
Outreach	265	406	(116)	-	555
Events	-	36	(36)	-	-
	615	727	(314)	-	1,028
Designated funds					
Reserves tied to tangible fixed assets	39,916	-	(7,120)	9,784	42,580
Animal collection	899	-	(899)	693	693
Education	230	-	(230)	375	375
Outreach	1,498	-	(1,498)	1,458	1,458
Future capital projects	1,601	-	(1,601)	1,507	1,507
	44,144	-	(11,348)	13,817	46,613
Other charitable funds	-	-	-	-	-
Total group funds employed	44,759	727	(11,662)	13,817	47,641

	Unrestricted			2017 Total Funds £'000	2016 Total Funds £'000
	General £'000	Designated £'000	Restricted £'000		
Tangible Fixed Assets	11,436	44,780	-	56,216	52,717
Investments	-	-	-	-	-
Current Assets and Liabilities	(2,725)	-	-	(2,725)	(2,708)
Long Term Liabilities	(5,850)	-	-	(5,850)	(5,250)
Future Charitable Objectives	(2,861)	1,833	1,028	-	-
	-	46,613	1,028	47,641	44,759

The restricted income funds derive from the Society's 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 and that are in line with the charitable objectives.

NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS (CONTINUED)

18. Capital Commitments

	Group		Society	
	2017 £'000	2016 £'000	2017 £'000	2016 £'000
Capital expenditure, contracted for but not provided in the financial statements	7,260	4,963	7,260	4,963

19. Leasing Commitments

The group's future minimum non-cancellable operating lease commitments are as follows:

	Group		Society	
	2017 £'000	2016 £'000	2017 £'000	2016 £'000
Within one year	68	60	56	60
Between one and five years	50	99	41	99
	118	159	97	159

20. Related Party Transactions

The Society received a charitable donation by Gift Aid from Chester Zoo Enterprises Limited of £375,929 (2016: £646,245). The Society also leases retail and catering outlets to Chester Zoo Enterprises Limited for an annual lease of £694,708 (2016: £717,916) and also charged staff and support costs totalling £2,519,469 (2016: £2,510,955).

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 and closed to future accrual in March 2012. In line with FRS102, a surplus can only be recognised in the balance sheet to the extent that the Society can gain economic benefit from it. As the scheme is closed to future accrual, a surplus can only be recognised to the extent of an agreed refund, so there is not recognition of the surplus at the year end.

A full actuarial valuation was carried out as at 31 December 2014 and updated to 31 December 2017 for the purpose of these disclosures by Mercer, a qualified independent actuary.

	2017 £'000	2016 £'000
Present value of funded defined benefit obligations	19,088	19,899
Fair value of plan assets	24,442	21,990
Surplus	5,354	2,091
Effect of asset ceiling	(5,354)	(2,091)
Net defined benefit asset / (liability) recognised	-	-

The major assumptions made by the actuary for the defined benefit scheme were as follows:

Weighted average assumptions used to determine benefit obligations at:	2017	2016
Discount rate	2.60%	2.70%
Rate of price Inflation (RPI)	3.20%	3.30%
Rate of pension increases (5% RPI)	3.00%	3.30%
Rate of pension increases (2.5% RPI)	2.05%	2.25%
Weighted average assumptions used to determine net pension cost:		
Discount rate	2.70%	3.90%
Rate of price Inflation (RPI)	3.30%	3.10%
Rate of pension increases (5% RPI)	3.20%	3.05%
Rate of pension increases (2.5% RPI)	2.25%	2.05%
Assumed life expectations on retirement at age 65:		
Male member retiring today (member age 65)	22.7	22.6
Male member retiring in 20 years (member age 45 today)	24.8	24.7
Female member retiring today (member age 65)	25.2	25.1
Female member retiring in 20 years (member age 45 today)	27.5	27.4

The fair value of the plan assets and return on those assets were as follows:

	Fair value at 31 Dec 2017 (£'000)	2017 %	Fair value at 31 Dec 2016 (£'000)	2016 %
Cash and cash equivalents	78	0.3	101	0.4
Equities	12,052	49.3	11,116	50.6
Debt Instruments	9,862	40.3	8,522	38.8
Property	2,450	10.1	2,251	10.2
Total	24,442	100.0	21,990	100.0

	2017 £'000	2016 £'000
Change in defined benefit obligation		
Benefit obligation at beginning of year	19,899	16,309
Interest cost	523	600
Remeasurement: Actuarial (gain)/loss	(253)	4,854
Benefits and expenses paid	(1,081)	(1,864)
Benefit obligation at end of year	19,088	19,899

NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS (CONTINUED)

	2017 £'000	2016 £'000
Change in scheme assets		
Fair value of scheme assets at beginning of year	21,990	21,952
Interest income	593	830
Employer contributions (incl. employer direct benefit payments)	1,500	1,000
Benefits and expenses paid	(1,081)	(1,864)
Remeasurements – return on scheme assets less interest income	71,440	72
Fair value of scheme assets at end of year	24,442	21,990
Expense recognised in the profit and loss account		
Current service cost	-	-
Interest expense	523	600
Interest (income) on plan assets	(593)	(830)
Interest expense on effect of (asset ceiling)	70	230
Total net interest cost recognised in the profit and loss account	-	-
Remeasurements:		
Effect of changes in assumptions	(253)	4,854
Effect of experience adjustments	-	-
Return on plan assets (excluding interest income)	(1,440)	(72)
Remeasurement on effect of asset ceiling	3,193	(3,782)
Pension deficit reduction accrual	56	-
Total remeasurements included in other comprehensive income gains and losses	1,556	1,000
Total pension cost recognised in the SOFA	1,556	1,000

The Society has committed to making annual deficit contributions with a view to funding the scheme on a solvency basis in the medium term. However, the Scheme remains in surplus on a technical provisions basis. During 2017 the Society granted an increase to the first legal charge over assets of the Society with a market value of circa £10m, to the Trustees of the Scheme.

Contributions, Defined Contribution Scheme

Contributions to the defined contribution scheme totalled £529,215 (2016: £531,760). The expenditure is taken from unrestricted funds.

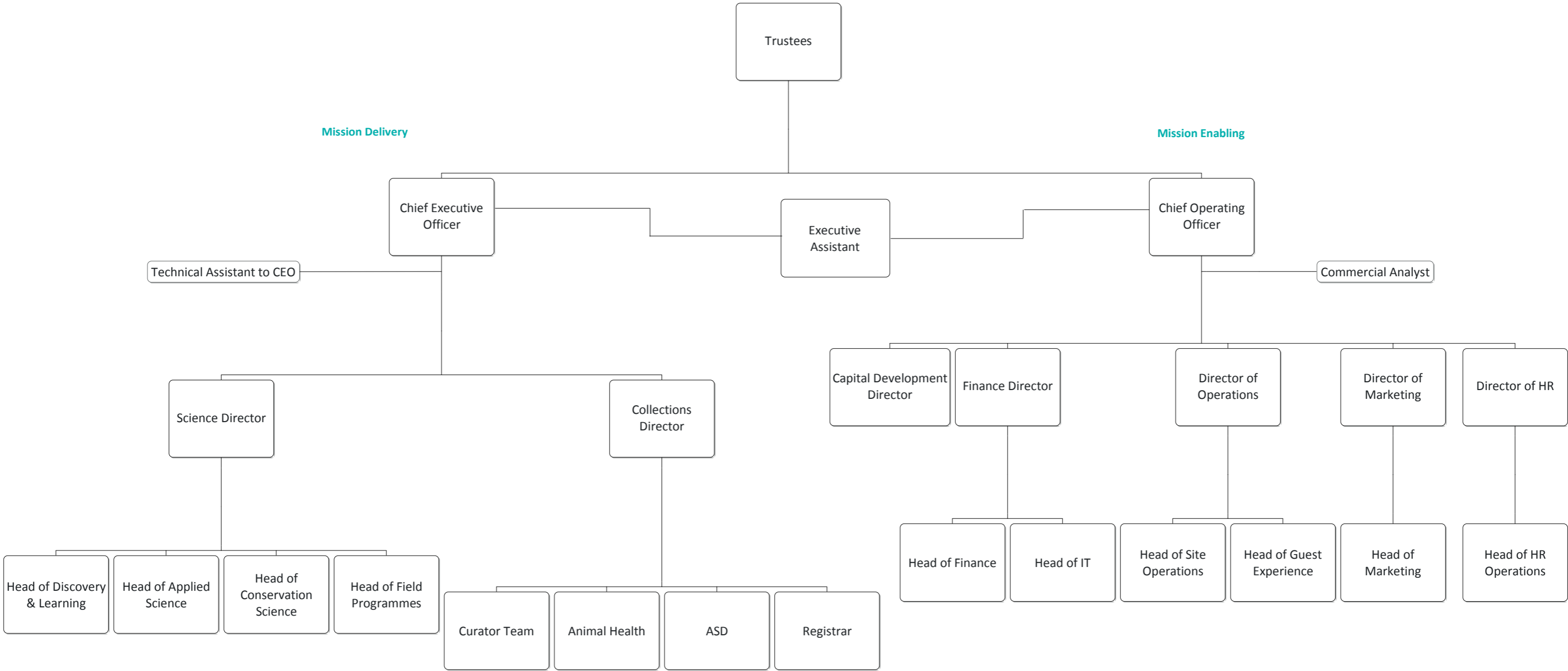
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ORGANISATION MANAGEMENT STRUCTURE 2017



BIRD STOCKLIST (page 1 of 4)

Preferred Scientific Name	Common Name	Stock 31/12/16			Acquisitions			Births			Deaths			Dispositions			Stock 31/12/17		
		M	F	U	M	F	U	M	F	U	M	F	U	M	F	U	M	F	U
<i>Casuarus casuarus</i>	Southern cassowary	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0
<i>Crax blumenbachii</i>	Red-billed curassow	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0
<i>Guttera pucherani</i>	Kenya crested guineafowl	3	3	0	0	0	0	2	0	0	0	0	0	1	1	0	4	2	0
<i>Arborophila javanica</i>	Chestnut-bellied tree partridge	0	0	0	2	2	0	0	0	0	1	0	0	0	0	0	1	2	0
<i>Arborophila gingica</i>	Collared Partridge	3	5	0	0	0	0	0	3	3	0	0	1	1	1	0	2	7	2
<i>Rollulus rouloul</i> *	Crested wood partridge	6	4	0	0	0	0	2	3	6	1	1	6	0	0	0	7	6	0
<i>Tragopan temminckii</i>	Temminck's tragopan	1	1	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1	0
<i>Tragopan caboti</i>	Cabot's tragopan	3	2	0	0	0	0	1	1	1	1	0	1	1	0	0	2	3	0
<i>Lophophorus impejanus</i>	Himalayan impeyan pheasant	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1	1	0
<i>Lophura inornata</i>	Salvadori's pheasant	2	1	0	0	0	0	0	0	0	0	0	0	0	0	0	2	1	0
<i>Lophura hatinhensis</i>	Vietnamese pheasant	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0
<i>Syrmaticus reevesii</i>	Reeve's pheasant	1	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0
<i>Chrysolophus amherstiae</i>	Lady Amherst's pheasant	1	2	0	0	0	0	0	0	0	0	0	0	0	0	0	1	2	0
<i>Polyplectron chalcurum</i>	Bronze-tailed peacock pheasant	2	2	0	0	0	0	0	0	0	0	0	0	0	0	0	2	2	0
<i>Polyplectron napoleonis</i>	Palawan peacock pheasant	4	3	0	0	0	0	3	3	0	0	0	0	0	0	0	7	6	0
<i>Argusianus argus</i>	Great argus	1	1	0	0	0	0	1	1	0	0	0	0	0	0	0	2	2	0
<i>Afropavo congensis</i>	Congo peacock	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0
<i>Dendrocygna viduata</i>	White-faced whistling duck	2	5	34	0	0	0	0	0	25	0	0	5	0	0	0	2	5	54
<i>Thalassornis leuconotus leuconotus</i>	African white-backed duck	2	2	0	0	0	0	0	0	0	1	0	0	0	0	0	1	2	0
<i>Anser erythropus</i>	Lesser white-fronted goose	1	0	1	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0
<i>Branta ruficollis</i>	Red-breasted goose	3	2	4	0	0	0	0	0	4	0	0	2	1	1	0	2	1	6
<i>Anas capensis</i>	Cape teal	1	1	9	0	0	0	0	0	0	1	0	0	0	0	0	0	1	9
<i>Anas erythrorhyncha</i>	Red-billed pintail	3	1	4	0	0	0	0	1	0	2	0	2	0	0	0	1	2	2
<i>Aythya baeri</i>	Baer's pochard	8	12	1	0	0	0	2	5	3	1	0	0	5	5	0	4	12	4
<i>Aythya fuligula</i> *	Tufted duck	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
<i>Aythya nyroca</i> *	Ferruginous Duck	5	4	0	0	0	0	0	0	7	0	0	0	0	0	0	5	4	7
<i>Marmaronetta angustirostris</i> *	Marbled teal	1	4	3	0	0	0	0	0	0	0	1	0	1	3	3	1	1	5
<i>Netta rufina</i>	Red-crested pochard	2	1	0	0	0	0	0	0	1	0	0	1	1	0	0	1	1	0
<i>Oxyura leucocephala</i>	White-headed duck	4	6	3	0	0	0	0	0	11	2	2	1	0	0	0	2	4	13
<i>Sarkidiornis melanotos</i>	African comb duck	1	1	0	0	0	0	0	0	11	0	0	7	0	0	0	1	1	4
<i>Tadorna ferruginea</i>	Ruddy shelduck	1	3	0	0	0	0	0	0	1	0	0	0	0	0	0	1	3	1
<i>Spatula hottentota</i>	Hottentot teal	4	2	0	0	0	0	0	0	0	0	2	0	0	0	0	4	0	0
<i>Spatula querquedula</i>	Garganey	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0
<i>Asarcornis scutulata</i>	White-winged duck	1	7	0	0	0	0	1	2	0	0	0	0	0	4	0	2	5	0
<i>Mergellus albellus</i>	Smew	4	5	0	0	0	0	0	0	3	0	0	3	0	0	0	4	5	0
<i>Phoenicopterus</i>	Flamingo	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0
<i>Phoenicopterus chilensis</i>	Chilean flamingo	46	50	13	0	0	0	0	0	17	0	0	7	0	0	11	46	50	12
<i>Phoenicopterus ruber</i>	Caribbean Flamingo	51	43	21	0	0	0	0	0	22	0	2	4	0	0	12	51	41	27
<i>Caloenas nicobarica</i>	Nicobar pigeon	3	4	1	0	0	0	0	0	2	0	0	0	0	0	0	3	4	3
<i>Chalcophaps indica</i>	Emerald Dove	8	8	0	0	0	0	3	2	7	0	0	4	0	0	0	11	10	3

BIRD STOCKLIST (page 3 of 4)

<i>Rhabdotorhinus corrugatus</i>	Wrinkled hornbill	1	0	0	1	1	0	0	0	0	0	0	0	0	0	0	2	1	0
<i>Coracias caudatus</i>	Lilac-breasted roller	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0
<i>Pteroglossus viridis</i>	Green aracari	1	3	0	0	0	0	0	0	2	0	0	1	0	2	1	1	1	0
<i>Pogonornis melanopterus</i>	Brown-breasted barbet	1	1	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1	0
<i>Eos histrio</i>	Red-and-blue lory	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0
<i>Trichoglossus johnstoniae</i>	Mount Apo Lorikeet	3	4	0	0	0	0	0	0	1	1	1	0	0	0	0	2	3	1
<i>Lorius garrulus flavopalliatu</i>	Yellow-backed chattering lory	2	2	0	0	0	0	0	0	0	0	0	0	0	0	0	2	2	0
<i>Psittacula derbiana</i>	Derbyan parakeet	8	6	0	0	0	0	0	0	2	3	0	1	0	0	0	5	6	1
<i>Loriculus galgulus</i>	Blue-crowned parrot	5	3	0	0	0	0	0	0	3	1	0	0	0	0	0	4	3	3
<i>Anodorhynchus hyacinthinus</i>	Hyacinth macaw	2	2	0	0	0	0	0	0	0	0	0	0	0	0	0	2	2	0
<i>Ara glaucogularis</i>	Blue-throated macaw	1	1	0	0	2	0	0	0	0	0	0	0	0	0	0	1	3	0
<i>Pyrrhura griseipectus</i>	Gray-breasted parakeet	3	3	0	0	0	0	1	1	1	1	0	0	0	0	0	3	4	1
<i>Amazona lilacina</i>	Lilacine amazon	2	1	0	0	0	0	0	0	0	0	0	0	0	0	0	2	1	0
<i>Guaruba guarouba</i>	Golden conure	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0
<i>Cacatua haematuropygia</i>	Red-vented cockatoo	2	2	0	0	0	0	0	0	0	0	1	0	0	0	0	2	1	0
<i>Cacatua sulphurea</i>	Lesser sulphur-crested cockatoo	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0
<i>Cissa thalassina thalassina</i>	Short-tailed green magpie	5	6	0	0	0	0	2	2	1	0	1	1	0	0	0	7	7	0
<i>Cyanocorax yncas</i>	Green jay	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0
<i>Cyanopica cyanus</i>	Azure-winged magpie	1	0	0	1	3	0	0	0	0	0	0	0	0	0	0	2	3	0
<i>Pyrrhocorax pyrrhocorax</i>	Red-billed Chough	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0
<i>Urocissa erythrorhyncha</i>	Red-billed Blue Pie	4	2	0	0	0	0	1	3	4	0	0	4	2	1	0	3	4	0
<i>Pycnonotus jocosus</i>	Red-whiskered bulbul	4	6	10	0	0	0	0	0	1	0	0	0	0	0	0	4	6	11
<i>Zosterops eurycricotus</i>	African montane white-eye	1	2	0	0	0	0	0	0	0	1	1	0	0	0	0	0	1	0
<i>Irena puella</i>	Fairy bluebird	6	5	0	0	0	0	1	0	4	1	0	4	0	0	0	6	5	0
<i>Sturnidae</i>	Starlings & oxpeckers	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0
<i>Aplonis panayensis</i> *	Asian Glossy Starling	0	0	140	0	0	0	0	0	14	1	0	11	0	0	0	13	10	221
<i>Cosmopsarus regius</i>	Royal Starling	1	2	1	0	1	0	0	0	0	0	0	0	0	1	0	1	2	1
<i>Lamprotornis iris</i> *	Emerald starling	0	0	80	0	0	0	0	0	0	0	0	0	0	0	0	0	0	80
<i>Lamprotornis superbus</i>	Superb starling	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
<i>Leucopsar rothschildi</i>	Bali mynah	1	14	0	0	0	0	1	1	0	0	4	0	0	0	0	2	11	0
<i>Mino dumontii</i>	Yellow-faced mynah	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1	1	0
<i>Onychognathus morio</i>	Red-winged starling	2	1	0	0	0	0	0	0	0	0	0	0	0	0	0	2	1	0
<i>Scissirostrum dubium</i>	Scissor-billed Starling	12	9	0	0	0	0	0	0	23	1	0	13	0	0	0	11	9	10
<i>Copsychus malabaricus</i>	White-rumped Shama	3	7	0	0	0	0	2	3	6	0	0	6	1	4	0	4	6	0
<i>Copsychus saularis</i>	Magpie robin	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1	0
<i>Cossypha niveicapilla</i>	Snowy-headed robin chat	3	2	0	0	0	0	1	2	0	0	0	0	1	3	0	3	1	0
<i>Turdus boulboul</i>	Grey-winged blackbird	2	2	0	0	0	0	0	0	0	0	0	0	0	0	0	2	2	0
<i>Zoothera citrina</i>	Orange-headed thrush	1	1	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1	0
<i>Zoothera dohertyi</i>	Chestnut-backed thrush	1	5	0	0	0	0	0	0	0	0	0	0	0	0	0	1	5	0
<i>Dryonastes courtoisi</i>	Blue-crowned laughing thrush	3	1	0	0	2	0	2	1	4	0	1	4	0	0	0	5	3	0
<i>Garrulax bicolor</i>	Black & White Laughingthrush	8	9	0	0	0	0	4	2	5	1	1	5	1	5	0	10	5	0
<i>Leiothrix lutea</i> *	Pekin robin	1	1	48	0	0	0	1	1	13	1	1	7	0	0	0	5	3	48

BIRD STOCKLIST (page 4 of 4)

<i>Liocichla omeiensis</i>	Grey-cheeked Liocichla	6	3	0	0	1	0	1	1	1	0	0	1	2	0	0	5	5	0
<i>Trochalopteron milnei</i>	Red-tailed laughing thrush	4	2	0	0	0	0	0	0	0	0	0	1	0	0	3	2	0	
<i>Foudia madagascariensis</i> *	Red fody	0	0	26	0	0	0	0	0	11	0	0	12	0	0	0	1	1	39
<i>Ploceus cucullatus cucullatus</i> *	Village Weaver	0	0	35	0	0	0	0	0	3	0	0	8	0	0	0	0	0	34
<i>Ploceus nigricollis nigricollis</i>	Black-necked weaver	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0
<i>Taeniopygia guttata</i> *	Timor Zebra Finch	10	12	0	1	0	0	0	0	18	1	0	6	0	0	1	10	12	11
<i>Lonchura oryzivora</i> *	Javan sparrow	0	0	205	0	0	0	0	0	9	0	0	43	10	0	51	0	0	411
<i>Lonchura fuscata</i> *	Timor sparrow	1	1	6	0	0	0	0	0	1	0	0	0	0	0	0	1	1	7
<i>Coccothraustes affinis</i>	Collared grosbeak	1	1	0	0	0	0	2	1	0	1	0	0	0	0	0	2	2	0
<i>Icterus oberi</i>	Montserrat oriole	2	1	0	0	0	0	0	0	2	0	0	1	0	0	0	2	1	1
<i>Paroaria dominicana</i>	Pope cardinal	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0
<i>Ramphocelus bresilius</i>	Brazilian tanager	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0
		402	408	697	9	18	0	48	49	284	47	42	210	42	42	83	400	406	1074
		1507			27			381			299			167			1880		

* denotes managed in groups

MAMMALS STOCKLIST (page 1 of 3)

Preferred Scientific Name	Common Name	Stock 31/12/16			Acquisitions			Births			Deaths			Dispositions			Stock 31/12/17		
		M	F	U	M	F	U	M	F	U	M	F	U	M	F	U	M	F	U
<i>Dendrolagus goodfellowi</i>	Goodfellow's tree kangaroo	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1	0
<i>Thylogale brunii</i>	Dusky pademelon	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	2	0	0
<i>Echinops telfairi</i>	Lesser Madagascar hedgehog tenrec	1	2	0	0	0	0	0	0	7	0	0	4	0	0	2	1	2	1
<i>Hemicentetes semispinosus</i>	Streaked tenrec	0	0	0	1	0	3	0	0	0	0	0	1	0	0	0	1	0	2
<i>Macroscelides proboscideus</i>	Short-eared elephant shrew	5	3	0	0	0	0	3	1	1	2	1	1	2	0	0	4	3	0
<i>Orycteropus afer</i>	Aardvark	0	3	0	1	0	0	0	0	0	0	0	0	0	1	0	1	2	0
<i>Procavia capensis</i>	Rock hyrax	2	4	0	0	0	0	3	0	0	0	0	0	1	0	0	4	4	0
<i>Elephas maximus</i>	Asian elephant	1	6	0	0	0	0	1	0	0	0	0	0	0	0	0	2	6	0
<i>Choloepus didactylus</i>	Linne's two-toed sloth	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0
<i>Myrmecophaga tridactyla</i>	Giant anteater	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0
<i>Tupaia belangeri</i>	Northern tree shrew	0	1	0	2	0	0	0	0	0	1	0	0	0	0	0	1	1	0
<i>Eulemur rufus</i>	Red-fronted lemur	2	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0
<i>Haplemur alaotrensis</i>	Alaotran gentle lemur	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1	1	0
<i>Lemur catta</i>	Ring-tailed lemur	12	7	0	0	0	0	5	4	0	4	1	0	0	0	0	13	10	0
<i>Varecia variegata subcincta</i>	White-belted ruffed lemur	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	1	1	0
<i>Daubentonia madagascariensis</i>	Aye-aye	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0
<i>Cebuella pygmaea niveiventris</i>	Eastern pygmy marmoset	1	1	3	0	0	0	2	0	0	1	0	1	0	0	0	2	1	2
<i>Leontopithecus chrysomelas</i>	Golden-headed lion tamarin	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0
<i>Saguinus bicolor</i>	Pied tamarin	4	4	0	0	0	0	1	1	2	0	0	0	0	0	0	5	5	2
<i>Saguinus imperator subgriseus</i>	Emperor tamarin	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0
<i>Saguinus oedipus</i>	Cotton-top tamarin	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0
<i>Sapajus xanthosternus</i>	Buffy-headed capuchin	5	1	1	0	0	0	0	0	0	0	0	0	0	0	0	5	1	1
<i>Pithecia pithecia</i>	White-faced saki	1	1	0	0	0	0	2	0	0	1	0	0	0	0	0	2	1	0
<i>Alouatta caraya</i>	Black howler	1	2	0	0	0	0	0	0	0	0	0	0	0	0	0	1	2	0
<i>Ateles fusciceps rufiventris</i>	Black-headed spider monkey	3	5	0	0	0	0	0	2	1	0	0	1	0	0	0	3	7	0
<i>Macaca nigra</i>	Sulawesi crested macaque	5	12	0	0	0	0	0	1	0	0	0	0	0	0	0	5	13	0
<i>Macaca silenus</i>	Lion-tailed macaque	3	9	0	0	0	0	0	0	0	0	0	0	0	0	0	3	9	0
<i>Mandrillus sphinx</i>	Mandrill	3	10	0	0	0	0	0	0	0	2	0	0	0	0	0	1	10	0
<i>Hylobates lar</i>	Lar gibbon	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0
<i>Hylobates moloch</i>	Javan gibbon	2	1	0	0	0	0	0	1	0	0	0	0	0	0	0	2	2	0
<i>Pan troglodytes</i>	Chimpanzee	7	12	0	0	0	0	0	0	1	0	0	1	0	0	0	7	12	0
<i>Pongo pygmaeus</i>	Bornean orangutan	3	3	0	0	0	0	1	0	0	1	0	0	0	0	0	3	3	0
<i>Pongo abelii</i>	Sumatran orangutan	2	5	0	0	0	0	1	1	0	1	0	0	0	1	0	2	5	0
<i>Callosciurus prevostii rafflesii</i>	Prevost's squirrel	2	3	0	0	0	0	5	5	0	0	0	0	1	0	0	6	8	0
<i>Hypogeomys antimena</i>	Votsovotsa/Giant jumping rat	3	1	0	1	0	0	0	0	2	0	0	0	1	0	0	3	1	2
<i>Acomys cilicicus</i> *	Turkish spiny mouse	45	68	7	0	0	0	0	0	400	87	70	201	10	29	8	31	69	29
<i>Phloeomys pallidus</i>	Slender-tailed cloud rat	1	1	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0
<i>Heterocephalus glaber</i> *	Naked mole-rat	18	28	10	0	0	0	0	0	20	0	0	10	4	6	10	14	22	9
<i>Hystrix africaeaustralis</i>	Cape porcupine	1	1	0	0	0	0	0	1	1	0	0	1	0	0	0	1	2	0
<i>Hydrochoerus hydrochaeris</i>	Capibara	7	8	0	0	0	0	1	1	1	0	0	1	6	1	0	2	8	0
<i>Dasyprocta azarae</i>	Azara's agouti	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	1	1	0

MAMMALS STOCKLIST (page 2 of 3)

<i>Pteropus rodricensis</i>	Rodrigues Fruit Bat	109	125	1	0	0	0	15	22	7	48	18	7	17	0	0	59	130	3
<i>Carollia perspicillata</i> *	Seba's short-tailed bat	145	208	11	0	0	0	54	24	36	79	55	47	0	0	0	197	228	25
<i>Acinonyx jubatus soemmeringii</i>	Central African cheetah	3	3	0	0	0	0	0	0	0	0	1	0	0	0	0	3	2	0
<i>Felis silvestris grampia</i>	Scottish wild cat	2	1	0	0	0	0	0	0	0	0	0	0	1	0	0	1	1	0
<i>Panthera leo persica</i>	Asiatic lion	1	2	0	0	0	0	0	0	0	0	0	0	0	0	0	1	2	0
<i>Panthera onca</i>	Jaguar	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0
<i>Panthera tigris sumatrae</i>	Sumatran tiger	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0
<i>Arctictis binturong whitei</i>	Palawan binturong	1	1	0	0	1	0	0	0	0	0	0	0	0	1	0	1	1	0
<i>Mungotictis decemlineata</i>	Narrow-striped mongoose	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0
<i>Helogale parvula</i>	Dwarf mongoose	1	1	0	0	0	0	2	0	7	0	1	7	0	0	0	3	0	0
<i>Suricata suricatta</i>	Slender-tailed meerkat	8	3	0	1	1	0	0	0	0	1	0	0	5	3	0	3	1	0
<i>Lycaon pictus</i>	African hunting dog	2	1	0	0	0	0	0	0	8	1	0	1	0	0	0	1	1	7
<i>Speothos venaticus</i>	Bush dog	5	6	0	0	0	0	1	1	5	1	0	5	0	0	0	5	7	0
<i>Helarctos malayanus</i>	Malayan sun bear	1	1	0	0	0	0	0	0	1	0	0	1	0	0	0	1	1	0
<i>Tremarctos ornatus</i>	Andean bear	1	1	0	0	0	0	0	0	1	0	0	0	0	0	0	1	1	1
<i>Aonyx cinerea</i>	Oriental small-clawed otter	3	4	0	0	0	0	1	2	0	0	0	0	2	3	0	2	3	0
<i>Pteronura brasiliensis</i>	Giant otter	1	2	0	0	0	0	0	0	0	0	1	0	0	0	0	1	1	0
<i>Ailurus fulgens fulgens</i>	Red panda	1	1	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1	0
<i>Equus grevyi</i>	Grevy's zebra	2	3	0	0	1	0	0	0	0	0	0	0	1	0	0	1	4	0
<i>Equus hemionus onager</i>	Persian onager	3	5	0	0	1	0	0	0	0	2	2	0	0	0	0	1	4	0
<i>Tapirus indicus</i>	Malayan tapir	1	2	0	0	0	0	0	0	0	0	0	0	0	0	0	1	2	0
<i>Tapirus terrestris</i>	South American tapir	2	1	0	0	0	0	0	0	0	0	0	0	0	0	0	2	1	0
<i>Diceros bicornis michaeli</i>	Eastern Black rhinoceros	4	5	0	0	0	0	1	1	0	0	0	0	0	1	0	5	5	0
<i>Rhinoceros unicornis</i>	One-horned rhinoceros	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0
<i>Babyrousa babyrussa</i>	Babirusa	3	5	0	0	1	0	0	1	0	0	0	0	1	1	0	2	6	0
<i>Babyrousa celebensis</i>	North Sulawesi babirusa	0	0	0	1	1	0	0	0	2	0	0	0	0	0	0	1	1	2
<i>Phacochoerus africanus</i>	Warthog	4	7	0	0	0	0	0	0	0	0	0	0	1	0	0	3	6	0
<i>Potamochoerus porcus</i>	Red River hog	1	1	0	0	0	0	1	1	0	0	0	0	0	0	0	2	2	0
<i>Sus cebifrons</i>	Visayan warty pig	3	4	0	0	0	0	0	0	0	0	1	0	0	0	0	3	3	0
<i>Camelus bactrianus</i>	Bactrian camel	0	3	0	0	0	0	0	0	0	0	1	0	0	0	0	0	2	0
<i>Tragulus nigricans</i>	Philippine mouse-deer	1	2	0	1	0	0	0	0	2	0	0	1	0	0	0	2	2	1
<i>Pudu puda</i>	Southern pudu	4	1	0	0	0	0	1	0	0	0	0	0	1	0	0	4	1	0
<i>Muntiacus muntjak</i>	Indian muntjac	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	1	1	0
<i>Rucervus eldii thamin</i>	Burmese brow-antlered deer	1	7	0	0	0	0	2	3	0	1	2	0	0	0	0	2	8	0
<i>Rusa alfredi</i>	Philippine Spotted Deer	2	1	0	0	0	0	0	1	0	0	0	0	0	0	0	1	2	0
<i>Giraffa camelopardalis rothschildi</i>	Baringo giraffe	4	6	0	0	0	0	2	0	0	1	0	0	1	0	0	4	6	0
<i>Okapia johnstoni</i>	Okapi	3	2	0	0	0	0	0	0	0	0	1	0	0	0	0	3	1	0
<i>Madoqua kirkii</i>	Kirk's dik-dik	4	4	0	0	1	0	3	1	0	0	1	0	3	1	0	4	4	0
<i>Bos javanicus</i>	Javan banteng	4	7	0	0	0	0	3	2	0	3	0	0	0	0	0	4	9	0
<i>Bubalus depressicornis</i>	Lowland Anoa	1	3	0	0	0	0	1	0	0	0	0	0	0	0	0	2	3	0
<i>Syncerus caffer nanus</i>	Congo buffalo	1	6	0	0	0	0	0	0	0	0	0	0	0	0	0	1	6	0
<i>Tragelaphus eurycerus isaaci</i>	Eastern bongo	0	5	0	1	0	0	0	0	0	1	0	0	0	2	0	0	3	0
<i>Tragelaphus imberbis</i>	Lesser kudu	1	3	0	0	0	0	0	0	0	0	1	0	1	2	0	0	0	0

MAMMALS STOCKLIST (page 3 of 3)

<i>Tragelaphus speki</i> <i>gratus</i>	West African Sitatunga	1	18	0	0	0	0	0	0	0	0	0	0	0	4	0	1	14	0
<i>Cephalophus natalensis</i>	Red forest duiker	0	0	0	1	1	0	0	0	1	0	0	1	0	0	0	1	1	0
<i>Hippotragus equinus</i>	Roan antelope	2	9	0	0	0	0	0	1	1	2	1	1	0	0	0	0	9	0
<i>Oryx dammah</i>	Scimitar-horned oryx	0	2	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0
		486	687	33	15	13	3	112	78	507	241	158	293	62	59	20	469	712	87
		1206			31			697			692			141			1268		

* denotes managed in groups

REPTILES STOCKLIST (page 2 of 2)

<i>Shinisaurus crocodilurus</i>	Chinese crocodile lizard	0	0	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4
<i>Malayopython reticulatus</i>	Reticulated python	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0
<i>Simalia boeleni</i>	Boelen's python	2	1	0	2	2	0	0	0	0	0	0	0	0	0	0	4	3	0
<i>Corallus caninus</i>	Emerald tree boa	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0
<i>Boiga dendrophila</i>	Mangrove snake	1	1	0	0	0	0	0	0	7	0	0	0	0	0	0	1	1	7
<i>Gonyosoma oxycephala</i>	Red-tailed ratsnake	1	1	3	0	0	0	0	0	4	0	1	0	0	0	0	1	0	7
<i>Orthriophis moellendorffi</i>	Flower snake	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0
<i>Bothriechis schlegelii</i> *	Eyesh Viper	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0
<i>Cryptelytrops albolabris</i>	White-lipped Viper	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0
<i>Trimeresurus venustus</i> *	Beautiful pitviper	1	4	7	0	0	0	0	0	6	0	0	7	0	0	0	1	4	6
<i>Bitis rhinoceros</i>	West African gaboon viper	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0
<i>Erpeton tentaculatum</i> *	Tentacled snake	3	5	12	0	0	0	0	0	3	1	0	3	0	0	0	2	6	11
<i>Tomistoma schlegelii</i>	False gharial	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0
<i>Caiman crocodilus</i>	Spectacled caiman	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0
		105	135	149	10	7	4	0	0	119	15	19	53	28	8	56	90	109	150
		389			21			119			87			92			349		

* denotes managed in groups

AMPHIBIAN STOCKLIST

Preferred Scientific Name	Common Name	Stock 31/12/16			Acquisitions			Births			Deaths			Dispositions			Stock 31/12/17			
		M	F	U	M	F	U	M	F	U	M	F	U	M	F	U	M	F	U	
<i>Ingerophrynus divergens</i> *	Toad	0	0	14	0	0	0	0	0	0	0	0	0	0	0	0	0	0	14	
<i>Dendrobates auratus</i>	Green & black poison dart frog	8	6	0	0	0	0	0	0	2	2	4	0	0	0	0	0	6	2	2
<i>Dendrobates azureus</i> *	Dyeing Poison Dart Frog	12	7	8	0	0	0	0	0	0	1	1	1	0	0	0	11	6	7	
<i>Mannophryne trinitatus</i> *	Trinidad poison dart frog	0	0	24	0	0	0	0	0	0	0	0	0	0	0	0	0	0	22	
<i>Phyllobates terribilis</i> *	Golden poison dart frog	1	1	39	0	0	0	0	0	5	0	0	15	0	0	4	1	1	25	
<i>Oophaga pumilio</i>	Strawberry poison frog	0	0	8	0	0	0	0	0	2	0	0	0	0	0	0	0	0	10	
<i>Ranitomeya imitator</i>	Mimic poison frog	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	1	1	0	
<i>Excidobates mysteriosus</i> *	Marañón poison frog	2	5	36	0	0	0	0	0	1	0	0	0	0	0	0	2	5	37	
<i>Anothea spinosa</i> *	Spine-headed tree frog	0	0	4	0	0	0	0	0	5	0	0	1	0	0	0	1	1	6	
<i>Trachycephalus resinifictrix</i>	Mission golden-eyed tree frog	0	2	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1	0	
<i>Agalychnis moreletii</i> *	Morelet's tree frog	5	4	0	4	2	9	0	0	0	0	1	0	0	0	0	9	5	9	
<i>Cruziohyla calcarifer</i> *	Splendid leaf frog	0	0	13	0	0	0	0	0	0	0	0	11	0	0	0	2	0	0	
<i>Leptodactylus fallax</i>	Mountain chicken frog	6	17	0	0	0	0	0	0	0	1	4	0	0	0	0	5	13	0	
<i>Mantella aurantiaca</i> *	Golden mantella	21	11	111	0	0	0	0	0	46	0	0	2	0	0	20	21	11	135	
<i>Mantella expectata</i> *	Blue-legged mantella	0	0	12	0	0	0	0	0	38	0	0	7	0	0	0	0	0	43	
<i>Mantella madagascariensis</i> *	Malagasy mantella	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	
<i>Dyscophus guineti</i>	Sambava tomato frog	0	0	10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	10	
<i>Scaphiophryne gottlebei</i> *	Red rain frog	0	0	37	0	0	0	0	0	0	0	0	2	0	0	0	0	0	35	
<i>Scaphiophryne madagascariensis</i> *	Madagascar rain frog	0	0	10	0	0	0	0	0	0	0	0	4	0	0	0	0	0	6	
<i>Sylvirana maasonensis</i> *	Mao-Son frog	2	2	106	0	0	0	0	0	0	0	0	40	0	0	0	2	2	66	
<i>Staurois parvus</i> *	Splash frog	0	0	17	0	0	0	0	0	0	0	0	1	0	0	0	0	0	16	
<i>Staurois guttatus</i> *	Black-spotted rock frog	0	0	31	0	0	0	0	0	0	0	0	0	0	0	0	0	0	31	
<i>Nyctixalus pictus</i> *	Painted Indonesian tree frog	2	7	36	0	0	0	0	0	0	0	0	3	0	0	21	2	7	25	
<i>Polypedates dennysi</i> *	Denny's tree frog	0	0	16	0	0	0	0	0	0	0	0	1	0	0	0	0	0	15	
<i>Polypedates ottilophus</i> *	Bornean eared frog	3	2	76	0	0	0	0	0	2	0	0	36	0	0	16	3	2	20	
<i>Rhacophorus feae</i>	Fea's tree frog	0	0	0	0	0	18	0	0	0	0	0	8	0	0	0	0	0	10	
		66	66	627	17	15	27	0	0	124	5	12	141	0	0	61	81	75	572	
		759			59			124			158			61			728			

denotes managed in groups

FISHES STOCKLIST (page 1 of 2)

Preferred Scientific Name	Common Name	Stock 31/12/17			
		M	F	U	
<i>Gnathonemus petersii</i> *	Long-nosed Elephant Trunk Fish	0	0	6	
<i>Barbus hulstaerti</i> *	Butterfly barb	0	0	80	**
<i>Boraras Brigittae</i> *	Barb	0	0	25	
<i>Boraras merah</i> *	Phoenix rasbora	0	0	155	
<i>Danio margaritatus</i> *	Celestial pearl danio	1	1	4	
<i>Garra barreimiae</i> *	Omani Blind Cave Fish	0	0	21	
<i>Microrasbora</i> *	Dwarf rasbora	0	0	86	**
<i>Notropis chrosomus</i> *	Rainbow shiner	8	9	78	**
<i>Puntius titteya</i> *	Cherry barb	0	0	168	**
<i>Rasbora caudimaculata</i> *	Greater scissortail	1	0	32	
<i>Rasbora dorsiocellata</i> *	Eyespot rasbora	1	0	500	
<i>Rasbora kalochroma</i> *	Clown rasbora	0	0	11	
<i>Rasbora trilineata</i> *	Threelined scissortail rasbora	0	0	1201	
<i>Sundadanio axelrodi</i> *	Neon green rasbora	0	0	25	
<i>Pethia bandula</i> *	Barb	1	2	17	**
<i>Desmopuntius foerschi</i> *	Barb	0	0	19	
<i>Desmopuntius hexazona</i> *	Barb	0	0	55	
<i>Desmopuntius rhomboocellatus</i> *	Barb	0	0	16	
<i>Puntigrus</i> *	Barb	1	0	505	
<i>Puntigrus tetrazona</i> *	Sumatra barb	0	0	8	
<i>Chromobotia macracanthus</i> *	Clown loach	0	0	5	
<i>Acantopsis choirorhynchus</i> *	Horseface loach	0	0	8	
<i>Ambastaia sidthimunki</i> *	Dwarf loach	0	0	22	
<i>Gastromyzon borneensis</i> *	Loach	0	0	23	
<i>Hemiodus gracilis</i> *	Red tail hemiodus	0	0	72	
<i>Gasteropelecus sternicla</i> *	Black Lined Silver Hatchetfish	0	0	194	
<i>Hemigrammus rhodostomus</i> *	Rummynose tetra	0	0	30	
<i>Hyphessobrycon</i> *	Tetra	3	3	39	
<i>Hyphessobrycon erythrostigma</i> *	Bleeding heart tetra	2	4	9	
<i>Hyphessobrycon pyrrhonotus</i> *	Flame-back Bleeding Heart Tetra	0	0	27	
<i>Hyphessobrycon wadai</i> *	Tetra	0	0	8	
<i>Iguanodectes geisleri</i> *	Lizard tetra	0	0	43	
<i>Inpaichthys kerri</i> *	Purple Emperor Tetra	0	0	1	
<i>Moenkhausia</i> *	Tetra	4	4	41	
<i>Moenkhausia pittieri</i> *	Diamond tetra	0	6	299	**
<i>Nematobrycon lacortei</i> *	Rainbow tetra	2	2	11	
<i>Nematobrycon palmeri</i> *	Emperor tetra	1	0	99	
<i>Paracheirodon axelrodi</i> *	Cardinal tetra	0	0	1475	
<i>Thayeria boehlkei</i> *	Penguin Tetra	0	0	2	
<i>Synodontis njassae</i> *	Lake Malawi Upside-down Catfish	0	0	6	
<i>Synodontis polli</i> *	Poll's upsidedown catfish	0	0	1	

<i>Bunocephalus coracoideus</i> *	Twocolored banjo catfish	0	0	4	
<i>Brochis splendens</i> *	Brochis Catfish	0	0	8	
<i>Corydoras</i>	Corydoras catfish	0	0	2	
<i>Corydoras reticulatus</i> *	Reticulated Corydoras	0	0	4	
<i>Corydoras sterbai</i> *	Sterba's catfish	0	0	153	**
<i>Corydoras duplicareus</i> *	Corydoras catfish	7	3	19	
<i>Baryancistrus demantoides</i> *	Catfish	0	0	5	
<i>Farlowella vittata</i> *	Catfish	0	0	13	
<i>Hemiancistrus dolichopterus</i> *	Bristlenoe Plecostomus	3	3	52	
<i>Sturisoma aureum</i> *	Royal catfish	0	2	0	
<i>Melanotaenia</i> *	Rainbowfish	0	0	2	
<i>Melanotaenia lacustris</i> *	Lake Kutubu Rainbow Fish	0	0	55	**
<i>Pachypanchax sakaramyi</i> *	Killiefish	0	0	34	
<i>Fundulus bermudae</i> *	Bermuda killifish	0	0	157	**
<i>Ameca splendens</i> *	Butterfly Goodeid	0	0	452	
<i>Zoogoneticus tequila</i> *	Crescent Zoe	0	0	90	**
<i>Hippocampus abdominalis</i> *	Big-bellied Seahorse	0	0	31	**
<i>Serranus tortugarum</i> *	Chalk seabass	0	0	19	
<i>Pseudochromis fridmani</i> *	Orchid dottyback	0	0	1	
<i>Pterapogon kauderni</i> *	Emporor/Banggai Cardinal Fish	0	0	15	**
<i>Chelmon rostratus</i> *	Copperband butterflyfish	0	0	1	
<i>Centropyge bicolor</i> *	Bicolor angelfish	0	0	1	
<i>Centropyge tibicen</i> *	Keyhole angelfish	0	0	1	
<i>Geophagus sveni</i> *	Eartheater	0	0	9	
<i>Mikrogeophagus ramirezi</i> *	Blue butterfly cichlid	0	0	11	
<i>Paretroplus damii</i> *	Cichlid	0	0	25	
<i>Paretroplus kieneri</i> *	Kieneri cichlid	0	0	17	
<i>Paretroplus menarambo</i> *	Pin Striped Damba	1	1	11	
<i>Pterophyllum scalare</i> *	Freshwater angelfish	0	0	2	
<i>Amphiprion frenatus</i> *	Tomato Clown Fish	0	0	1	
<i>Amphiprion ocellaris</i> *	Common Clownfish	0	0	9	
<i>Chrysiptera parasema</i> *	Goldtail damselfish	0	0	2	
<i>Lipophrys pholis</i> *	Shanny blenny	0	0	5	
<i>Hypseleotris compressa</i> *	Empire gudgeon	0	0	2	
<i>Gobiodon okinawae</i> *	Golden goby	0	0	1	
<i>Periophthalmus novemradiatus</i> *	Pearse's mudskipper	0	0	13	
<i>Pomatoschistus minutus</i> *	Sand goby	0	0	1	
<i>Stiphodon semoni</i> *	Goby	0	0	2	
<i>Siganus vulpinus</i> *	Foxface rabbitfish	0	0	3	
<i>Ctenochaetus tominiensis</i> *	Bristle-tooth Tang	0	0	1	
<i>Zebrasoma flavescens</i> *	Yellow tang	0	0	7	
<i>Parosphromenus linkei</i> *	Liquorice Gourami	1	1	205	**
<i>Parosphromenus nanyi</i> *	Nagy's licorice gourami	0	0	2	

FISHES STOCKLIST (page 2 of 2)

<i>Trichogaster leerii</i> *	Pearl Gourami	3	3	618	**
<i>Betta pallifina</i> *	Pallifina betta	0	0	13	
<i>Betta hendra</i> *	Betta	3	4	24	
<i>Canthigaster valentini</i>	Saddled puffer	0	0	1	
		43	48	7531	
		7622			

* denotes managed in groups

** denotes bred in the collection in 2017

MEMBERS' TALKS 2017

Wednesday 22nd February at 7:30 pm

An Evening with our Giraffe Team

Not only does the Giraffe Team look after the zoo's Giraffes but also the Babirusa, Bactrian Camel, Malayan Tapir and Okapi to name but a few of the fascinating species for which they're responsible. Join us for an update on the zoo species, find out about the issues facing the animals in the wild and what the zoo is doing in overseas conservation.

Thursday 23rd March at 7:30 pm

The Illegal Wildlife Trade

The world is currently dealing with an unprecedented rise in the illegal wildlife trade, the sale or exchange of wild animal and plant resources that are protected by international trade law. It is the 14th most lucrative international crime worth \$19 billion each year and every day 96 elephants are killed for their ivory tusks, three rhinos for their horns and 14,000 bears are kept in terrible conditions, farmed for their bile. Species are killed for use as medicine, food, fashion and trophies. This year we're campaigning against the illegal wildlife trade. Join us to find out how you can help.

The zoo's Field Conservation Team

Thursday 20th April at 7:30 pm

Expedition Ecuador 2017

In January 2017 we ran our fourth annual conservation expedition. A team of twelve members of staff, led by our Director General Dr Mark Pilgrim, travelled to Ecuador to assist with our ongoing project researching and monitoring the Endangered Ecuador amazon parrot. Threatened by habitat loss and poaching, this species is in great need of our support. The team was made up of staff from all areas of the zoo including Guest Services, Security, Retail, and the Animal and Plant Teams. Join us to hear all about how Mark and the team got on.

Tuesday 23rd May at 7:30 pm

Behind the Scenes of the Secret Life of the Zoo

We'll show you how the seed of an idea for a programme about the zoo became the popular Channel 4 documentary. With outtakes, live keeper interviews and a behind the scenes look at where the show was put together, we'll give you an insight into the world of television.

Wednesday 21st June at 7:30 pm

An Evening with the Twilight Team

They're called the Twilight Team but their species go far and wide in the zoo! As well as the bats in Fruit Bat Forest, the Twilight Team are also keepers of the zoo's red pandas, giant anteaters, Malagasy narrow striped mongoose, slender-tailed meerkats, aardvarks, Visayan warty pigs and others. The team will be updating you on the species in the section.

Tuesday 18th July at 7:30 pm

Why we do science at the zoo

Dr Simon Dowell

Scientific research at Chester Zoo provides the evidence base that we need to ensure that our conservation work is effective and has the greatest possible impact, both in the zoo and in the field. This talk will show how we use research to tackle a wide range of conservation issues using examples from our scientific work. Come and find out how we use science to improve breeding success in rhinos, work out how many frogs there are in a rain forest and help elephants live alongside people in India.

Simon joined the zoo as Science Director last year, coming from an academic career previously at two different UK universities. He has had a long involvement with the Zoo, having coordinated our conservation outreach project in Sichuan, China since 2002 where our capacity building support for five nature reserves has led to protection of habitat for pandas and endemic birds.

Wednesday 20th September at 7:30 pm

Sumatran Orangutan Conservation

Featuring:

- Orangutan Conservation – what's the current situation in Sumatra with Dr Ian Singleton
- Human Wildlife Conflict in Sumatra – the Orangutan Angle with Helen Buckland (SOS) and Ricko Jaya (OIC and HOCRU)

Ian will be highlighting SOCP's work from the process of conservation management, education and cultural change in Sumatra, including work in confiscation of illegally held orangutans, release and post release monitoring and building Orangutan Haven for orangutans not equipped for release in the wild.

Helen and Ricko are uniquely placed to discuss this conflict situation. HOCRU has been supporting the government in its law enforcement efforts for wildlife and ecosystem conservation. Law enforcement is still a major challenge in Indonesia and the improvement of this by the conservation agency will help mitigate and prevent conflict incidents.

- Orangutan health in conservation – the Orangutan Veterinary Advisory Group with Yenny Jaya (SOCP)
- Yenny will be talking about veterinary aspects of SOCP's work and discussing the Orangutan Veterinary Advisory Group (OVAG), a capacity building and expertise network to improve conservation impact of the organisations participating.

Ian Singleton is the director of the Sumatran Orangutan Conservation Programme (SOCP), recently featured in the Leonardo DiCaprio documentary on climate change 'Before the Flood'. Ian's work involves confiscating illegal pet orangutans and returning them to the wild, research and monitoring of the remaining wild orangutan population and in efforts to protect their habitat.

Helen Buckland is the Director of the Sumatran Orangutan Society. For more than 10 years, she has worked closely with partners in Sumatra to develop, deliver and fund effective conservation programmes, as well as campaigning to break the link between oil palm development and deforestation.

Ricko Jaya leads the OIC's HOCRU (Human Orangutan Conflict Response Unit) project. He's a leading member of the new guard of Indonesian conservation heroes who have the academic acumen to succeed and, more importantly, the desire and willingness to fight for the country's ecological heritage.

Yenny Jaya is a senior vet at SOCP and a committee member of OVAG. Visiting Chester Zoo for a three month internship, she is a graduate of the Bogor Agricultural Institute and quickly became the Quarantine Manager, overseeing the entire Centre, as well as performing as a senior veterinarian.

Tuesday 24th October

The Weirdly Wonderful

Who needs fiction when the facts are far more startling? Since it's Halloween, we thought we'd celebrate by looking at some of the weirdly wonderful traits found in the animal kingdom. From blood-sucking leeches to vampire bats, our Zoo Rangers will share amazing tales of the natural world.

Monday 20th November

An Evening with our Rhinos Team

Find out about the working life of our rhinos' team as they update you on the species on their section, amongst which are the Black Rhino and the Greater One Horned Rhino. The team will tell you about the training and enrichment it provides to the animals, our conservation field work for endangered species and the evening wouldn't be complete without some animal anecdotes!

Wednesday 6th December

Towards gorillas and beyond

How we are planning to develop the zoo over the next 15 years

Mark Pilgrim is Chester Zoo's Chief Executive Officer. He joined the zoo in 1988 as a bird keeper, becoming Chief Curator responsible for the whole animal and plant collection in 2001. Mark is the Vice-chairman of the European Association of Zoos and Aquariums (EAZA) and the Chair of the EAZA Technical Assistance committee. He is a Council member of the British and Irish Association of Zoos and Aquariums (BIAZA) and manages the European zoo populations of Black Rhino and the Ecuadorian Amazon parrot. In September 2010, Mark was appointed Director General (now Chief Executive Officer), only the fourth in the zoo's history.