



The North of England Zoological Society  
Annual Report and Financial Statements 2020

[www.chesterzoo.org](http://www.chesterzoo.org)

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# The North of England Zoological Society Annual Review & Financial Statements 2020

The Trustees of the North of England Zoological Society ("NEZS" / "the Charity" / "the Society") 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 2020, which are also prepared to meet the requirements for a directors' report and financial statements for Companies Act 2006 purposes.

NEZS is a conservation and education charity which owns and runs Chester Zoo.

The financial statements comply with the Charities Act 2011, the Companies Act 2006, the Society's 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).

## Charitable objects

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

The Society's five-year strategic plan was launched in 2018 and supports the 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

Registered Charity Number 306077  
Registered Company Number 00287902

# Governance

## Trustees, Executive Team & Advisers

### Honorary Positions

#### Vice President

The Honourable Lady Jane Heber-Percy

#### Trustees at the date of this report and serving during the year:

#### Elected by the members

Bruce Ursell – Chairman

Malcolm Ardron – Vice Chairman

William Beale – Vice Chairman

Jen Carter

Edwin Christmas

Penny Coates

Sandra Donnelly

Professor Richard Griffiths

Professor David MacDonald

Angela Pinnington (Retired 17 September 2020)

Lee Rawlinson

#### Co-opted by the Trustees

David Chinn (Appointed 17 September 2020)

Amit Kalley (Appointed 11 January 2021)

Professor Russell Newton (Retired 17 September 2020)

Simon Venables (co-opted 17 September 2020, previously an elected Trustee).

#### Principal Executives

Dr Mark Pilgrim – Chief Executive Officer (resigned 12 March 2021)

Jamie Christon – Chief Operating Officer (appointed as Chief Executive Officer 12 March 2021)

#### Company Secretary

Aarco Services Limited represented by Nick Clarke

#### External Advisors to the Ethical Review Committee

Dr Ian Dunbar

Professor Richard Preziosi

Professor Thomas Webb

#### Independent Auditor

Grant Thornton UK LLP, Royal Liver Building, Liverpool, L3 1PS

#### Internal Auditor

RSM, 20 Chapel Street, Liverpool, L3 9AG

#### Solicitors

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

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

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

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

#### Bankers

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

HSBC, 47 Eastgate Street, Chester, Cheshire, CH1 1XW

#### Actuaries

Spence & Partners Limited, The Culzean Building, 36 Renfield Street, Glasgow, G2 1LU.

# Introduction

Following the incredible achievement of having attracted over 2 million visitors in 2019, the impact for us of the global pandemic arriving in the UK was unforeseen and devastating. The virus forced us to close our gates to the public and then to open with visitor numbers restricted. Despite the restrictions we did have the highlight on 24th October of being able to reopen Monsoon Forest, the jewel in the crown of Islands, following the devastating fire in 2018. Despite not being able to have a reopening party, we held a virtual event and showed our members, and those who attended the fire, including families of Cheshire Fire and Rescue Service, the finished product.

We were relieved to have been able to open long enough to hold our Lanterns evenings throughout December. Although the one month lockdown in November delayed the first few nights, we enjoyed seeing the smiles on our visitors' faces for each night in December until Christmas. It's become a very special period for us and was the pinnacle of a very difficult year.

The Trustees are indebted to the hard work of all the staff and executives within the zoo and are proud of the professional manner in which they have handled such a turbulent period in its history. Not only are we indebted to our own people, we were overwhelmed by the response to our calls for financial support from the public and particularly our members. The support of those members, both in donations and in continuing to maintain their subscriptions despite the long periods when they have been unable to visit, has helped us deal with the significant costs when shut with no visitor income. Our public call for financial support through the 'Save our Zoo' campaign was more successful than any of us could have imagined. It raised £3.3m and the support and outpouring of affection for Chester Zoo that we received from people in the local community and beyond was incredibly heart-warming.

As well as successfully lobbying for a summer re-opening date, we joined others in calling for the creation of a support fund for zoos. Sadly, however, the Government's fund is unduly restrictive for large entities like Chester Zoo and will only assist smaller zoos at a stage when they are possibly beyond saving – we continue to lobby to change this. The survival of all conservation zoos is important to all of us.

Despite all of these efforts we had to make difficult decisions to reduce costs and very sadly some staff left us and many went through periods of furlough – not something any of us would have anticipated at the start of the year.

Conservation and conservation education are our charitable objectives. The Trustees are proud of the fact that Covid-19 restricted but did not halt these objectives. The Society continued with its conservation work within the collections of animals and plants on the zoo site. Our team of conservationists worked tirelessly despite the Covid restrictions, and its impact on their work, colleagues and family life. Chester Zoo operates

24 hours a day and 7 days a week and this did not falter during this difficult period. Unfortunately we have had to move some of our field projects and other ex-situ activities to a 'ticking over' position. None of us wanted this to be the case but Chester Zoo is led by a professional group of people and we therefore remain confident that we will emerge from the Coronavirus restrictions in a good position to return to full levels of activity.

Our education and engagement team rose to the challenge of a greater emphasis upon the virtual world and established a suite of sessions for schools and colleges around the world. Our PR team and keepers also brought a taste of zoo life to the living rooms of thousands of people with their popular virtual tours.

During 2020, Angela Pinnington and Professor Russell Newton, both members of the Audit and Risk Management Committee, retired as Trustees and we thank both of them for their time and energy over the past years. We also elected Jen Carter as a Trustee and she has now joined the Audit and Risk Management Committee. Trustees have had to hold virtual board and committee meetings, not ideal in a crisis, but I must thank all of my colleagues for their contributions in directing our efforts to maintain as much of our mission as possible, whilst focusing upon our financial health.

Finally, although this is a review of 2020, I must mention that in March 2021 Dr Mark Pilgrim, who joined Chester Zoo in 1988 and has been key to many of our successes, not least in his term as Chief Executive from 2010, left the zoo in March 2021. Mark's reputation within the zoo community made him admirably placed to ensure that we had influence at the highest levels. We were sorry to see Mark leave and wish him well with his future activities.

Trustees appointed Jamie Christon, formerly the Chief Operating Officer, as Chief Executive in March and we look forward to Jamie leading the zoo back to full strength.

**Bruce Ursell**, Chair of Trustees

# The Year in Numbers

## In 2020...

WE OPENED FOR  
**252**  
DAYS OUT OF 366

VISITOR RELATED  
INCOME FELL BY  
**£10m**

OUR "SAVE OUR ZOO"  
CAMPAIGN RAISED  
A MUCH-NEEDED  
**£3.3m**

WE WELCOMED  
**1,182,652**  
VISITORS

WE THANKED YOU  
FOR BUYING  
**20,862**  
ADOPTIONS

WE WELCOMED  
**75,019**  
SOCIALLY-DISTANCED  
VISITORS TO THE  
LANTERNS

OUR VIRTUAL ZOO  
DAY VIDEOS HAD  
**17,244,399**  
VIEWS ON FACEBOOK

**5,593**  
LEARNERS TOOK PART IN  
ONLINE WORKSHOPS WITH  
OUR EDUCATION EXPERTS

WE SPENT  
**£28.4m**  
ON OUR MISSION

WE PLANTED  
**1,072**  
TREES

# Our Awards

## BIAZA Awards

*Animal Husbandry, Care and Breeding Category:*  
BIAZA Gold Award "A holistic approach to improving Rhinoceros Hornbill (*Buceros rhinoceros*) care & breeding at Chester zoo"

*Conservation Category:*  
BIAZA Silver Award "Nature Reserve at Chester Zoo"

*Horticulture Category:*  
BIAZA Gold Award "The Plant Project"

**Travellers' Choice Award for The Oakfield.**

**University of Chester, Premier Placement Provider Award**



# Highlights of the Year

JANUARY



Rare 'pencil tip-sized' pygmy chameleons hatch

FEBRUARY



Female Asian elephant born to mum Sundara Hi Way

MARCH



'Virtual Zoo Days' launch as zoo closes due to national lockdown

APRIL



Birth of critically endangered ring-tailed lemur twins delivers lockdown cheer

MAY



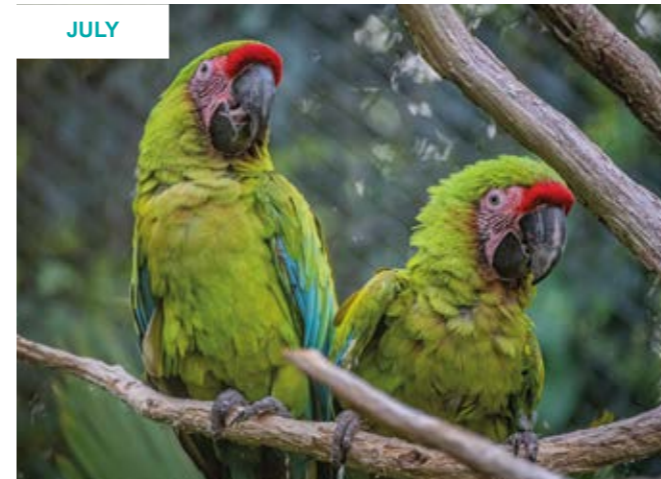
Large heath butterflies, bred at the zoo, return to Manchester peatlands for the first time in 150 years

JUNE



Save Our Zoo campaign raises millions as pandemic lockdown threatens zoo's future

JULY



Precious great green macaws hatch at zoo for the first time

AUGUST



Prestigious award ranks The Oakfield as one of the world's best pubs

SEPTEMBER



European zoo first as Mexican tree frogs are successfully bred

OCTOBER



Monsoon Forest reopens, almost two years after tragic fire

NOVEMBER



Joy as critically endangered eastern black rhino born

DECEMBER



Magical winter event, The Lanterns, sells out and draws high acclaim

CONSERVING SPECIES OF  
**LATIN AMERICA**



After only starting to work with critically endangered Great green macaws last year we were delighted that our pair bred for the first time and successfully reared two chicks during 2020. Often it can take many years for pairs of macaws to bond and settle before attempting to breed, so to get such a rapid breeding success was unexpected. This year sadly saw our expedition planned to Ecuador cancelled, but we have maintained support for the communities who continue to work on the Ecuadorian Amazon parrot.

The zoo's work with the Bermudan Government has continued strongly despite the complications of this year. We sent a further 10,000 greater Bermuda snails bred at Chester Zoo back to the island for reintroduction and also for the first time ever carried out a reintroduction of the related Lesser Bermuda snail; 800 of which were sent back to Bermuda for release. We hope to repeat this success with Bermuda skinks during 2021.

Survey work in Mexico, looking for the Lake Patzcuaro salamander, yielded good news, with the population estimated at around 100 individuals; twice that of previous estimates. Nevertheless this species is still right on the edge of being lost forever and so the work we do to prevent its extinction is vital, including writing the guidelines for managing and breeding the species which we completed during 2020.

It was another landmark year for our Andean bears. In the zoo we started 2020 with the birth of twins; a first for us and the UK. The cubs have developed well and it is only a shame

that more visitors haven't been able to enjoy their playful antics during the year as a result of our periods of closure. We have managed to continue our survey work for the species, monitoring and maintaining camera traps as well as working with local communities in the Andes on alternative livelihoods such as bee keeping, in an effort to reduce conflict with bears in the region.

Bee keeping also figured in our Brazilian work this year, where a scheme to work with communities producing giant armadillo friendly honey has grown. Honey production comes into conflict with the animals when they raid the bee hives and so a community programme looking at ways to produce honey without conflict is important for the survival of the giant armadillo in the region. The same team we support in Brazil also completed their survey work on highways and anteaters, to better understand the causes and impacts of road mortalities on these and other species. It is now hoped to use this insight to create mitigation strategies to reduce mortalities and benefit the species concerned.

CONSERVING SPECIES OF  
**AFRICA**



Despite less field work by our staff our Africa regional programme has had a very busy year. Our giraffe and okapi work has been exciting both in the zoo and the field this year; we were delighted to have our fourth birth of an okapi here at the zoo, the young female is doing well and is the culmination of 16 years of working with the species at Chester. Our efforts to find an okapi population in Uganda have continued during 2020 with further camera trapping in Semuliki National Park and Toro-Semliki Wildlife Reserve, whilst we also assisted in surveying the Kidepo Rothschild's giraffe population which is steadily increasing with 11 new births since last year. To support these and our other projects in Uganda we signed a 5 year MOU/partnership agreement with the Uganda Wildlife Authority.

After first finding giant pangolins in Nigeria our giant pangolin research has been steadily increasing over the years and this year we camera trapped at four different Ugandan localities to monitor the species. At Ziwa Rhino Sanctuary, our main giant pangolin study site, we photographed them 87 times during the study at 16 different sites in the sanctuary. Our camera trapping activities in Gabon were equally rewarding where our gorilla and large mammal survey captured over 5,000 images in just 30 days of a wide variety of species; we have now surveyed 800 km<sup>2</sup> of this remote and previously un-surveyed forest. For the third year in a row we had a chimpanzee born, the third young female into the group in just three years!

In the zoo we began our work with African vultures by bringing in the first African white-backed vulture and white-headed vulture to the zoo, both are critically endangered species. Vultures have been undergoing catastrophic declines over many African countries and four species are critically

endangered with a further three species also declining and now threatened with extinction. Ultimately they will form part of the new 'Grasslands' area of the zoo. Building upon the last few years of training in East Africa we managed to support the Tanzania Forest Services again by carrying out butterfly surveys along the Sigi River in the East Usambara Mountains in March, just before travel became impossible due to Coronavirus restrictions.

The year saw the continuation of our highly successful breeding record with Eastern black rhinoceros, and another calf was born into our group at Chester Zoo. We had great news from Kenya, learning that the support we give to Chyulu National Park has this year helped to achieve a zero rhino poaching year with not a single eastern black rhino dying during the year. The park has been declared as an Intensive Protection Zone for black rhinos; an important milestone in plans that may eventually see further black rhinos translocated into the national park.

CONSERVING SPECIES OF

## SOUTH EAST ASIAN ISLANDS



**Our Asian songbird work has carried on during the year both here in Chester and with our partners in the Cikananga Conservation Breeding centre on Java. We have focussed on looking in detail at the breeding and husbandry needs of Javan green magpie, investigating such factors as temperature, UV light and iron in the diet; eight chicks were reared from four pairs this year. Also on Java we progressed the action planning for *Leptophryne* toads; three species were worked upon including the critically endangered bleeding toad.**

Our partners at the Katala Foundation in the Philippines continued conservation efforts on the critically endangered Philippine cockatoo. The population continues to increase with this year's minimum estimate being 982 birds. Additionally more than 14,500 tree seedlings were planted to improve cockatoo foraging areas, especially a nearly 10 hectare block of degraded forest which will be improved by the planting. Elsewhere in the Philippines two species which have been a focus of work for Chester Zoo, the Philippine spotted deer and Visayan warty pig, were both reintroduced into the Danapa Nature Reserve on Negros. Both species are managed under breeding programmes with individuals kept and bred both at Chester (and some other European zoos) and in breeding centres in the Philippines.

The year marked the re-opening of the Monsoon Forest tropical house; a monumental task to make this habitat better than ever following the tragic fire at the end of 2018. Despite

all the trials and tribulations of having to work under Covid-19 restrictions, the house opened in the autumn with all the animals moved back from their temporary homes around the zoo, and the plants successfully restored to recreate the South-East Asian forest.

This has allowed the Bornean orangutans and Lar gibbons to once again occupy all of Realm of the Red Ape. The Bornean orangutans had another baby during the year and the hope is that this group can slowly expand in the once again larger area available to them. On the island of Borneo planning and conservation work continued; the orangutan state action plan for the next 10 years was finished and endorsed by the government and a substantial tree planting and management programme continued despite the Covid-19 restrictions in place. HUTAN also continued their education programme with our support with a number of online resources being developed and used.

CONSERVING SPECIES OF

## MAINLAND ASIA



**There was joy followed by sadness in the Hi-way family, our Asian elephant herd at Chester Zoo. At the end of February 15-year old mum Sundara gave birth to a healthy calf, a female which we named Riva. This was a welcome addition to our breeding herd and will boost our contribution to the conservation breeding for this species over the coming years.**

Sadly, in September we lost our herd's matriarch and great grandmother, Thi Hi-way, after an irreversible decline following her battle with arthritis. Thi had a huge impact on her family and on elephant conservation in general, not least via her involvement in studies throughout her life which have contributed to our knowledge and understanding of Asian elephants. She is missed by the herd and all who cared for her but her legacy lives on in the family she leaves behind.

In February a Chester Zoo team consisting of the head of our elephant team, one of our electricians and our field programme coordinator for Mainland Asia, travelled to Assam in India to work with our partners at the Wildlife Trust of India on our long-running Assam elephant project. They held a number of stakeholder meetings with local villages to understand human-elephant conflict issues and worked with the local people to advise on the installation of elephant proof electric fencing as part of the strategy to deter elephants from crops. They also held a training programme for elephant watchers in villages adjacent to the Manas National Park, enabling the translation of our understanding of individual recognition and behaviour in our herd to better strategies for surveillance and safe deterrence in the wild.

Subsequently, despite the Covid-19 lockdown restrictions, local villagers have been able to install more fencing (now 13km in total) and repair fences damaged by flash flooding during the monsoon season in July. Elephant incursion attempts were largely unsuccessful with no breaches of the fence in more than 80% of cases, and there was no human injury, property damage or crop loss in the villages where we are working this year. We were also able to support a number of the families involved in fence management who were suffering financial pressures due to lockdown.

We hold a number of important bird species from the dwindling montane forests of Asia and there were some notable breeding successes in 2020. These included two highly threatened Chinese endemic species, the Cabot's tragopan (a type of pheasant) which successfully raised four chicks and the Omei Shan Liocichla (a small songbird) which raised three young. In previous years our field support for Chinese nature reserves has benefitted these species in the wild so it is fitting that we are continuing to help prevent their extinction through our conservation breeding activities in the zoo.

# MADAGASCAR & MASCARENES



**Despite Coronavirus restrictions, our conservation partners at Madagasikara Voakajy (MV) were able to undertake some necessary fieldwork in the Mangabe forest reserve and conduct the latest survey for the golden mantella frog. In total, 283 ponds were visited including eight newly discovered ponds during this field season and 2,615 individuals were encountered from 122 ponds. 70% of the ponds were found to be in a good state and suitable for the species, which is an increase compared to previous years. More camera traps were installed in the reserve and they have already identified one new location for the endangered aye-aye and confirmed the presence of fossa.**

We also supported the production of a conservation action plan for another closely related frog species from the same region, the harlequin frog. One of our partners from MV enrolled as a new Conservation Scholar to conduct a research programme for this endangered species that will enable us to develop effective measures for its conservation.

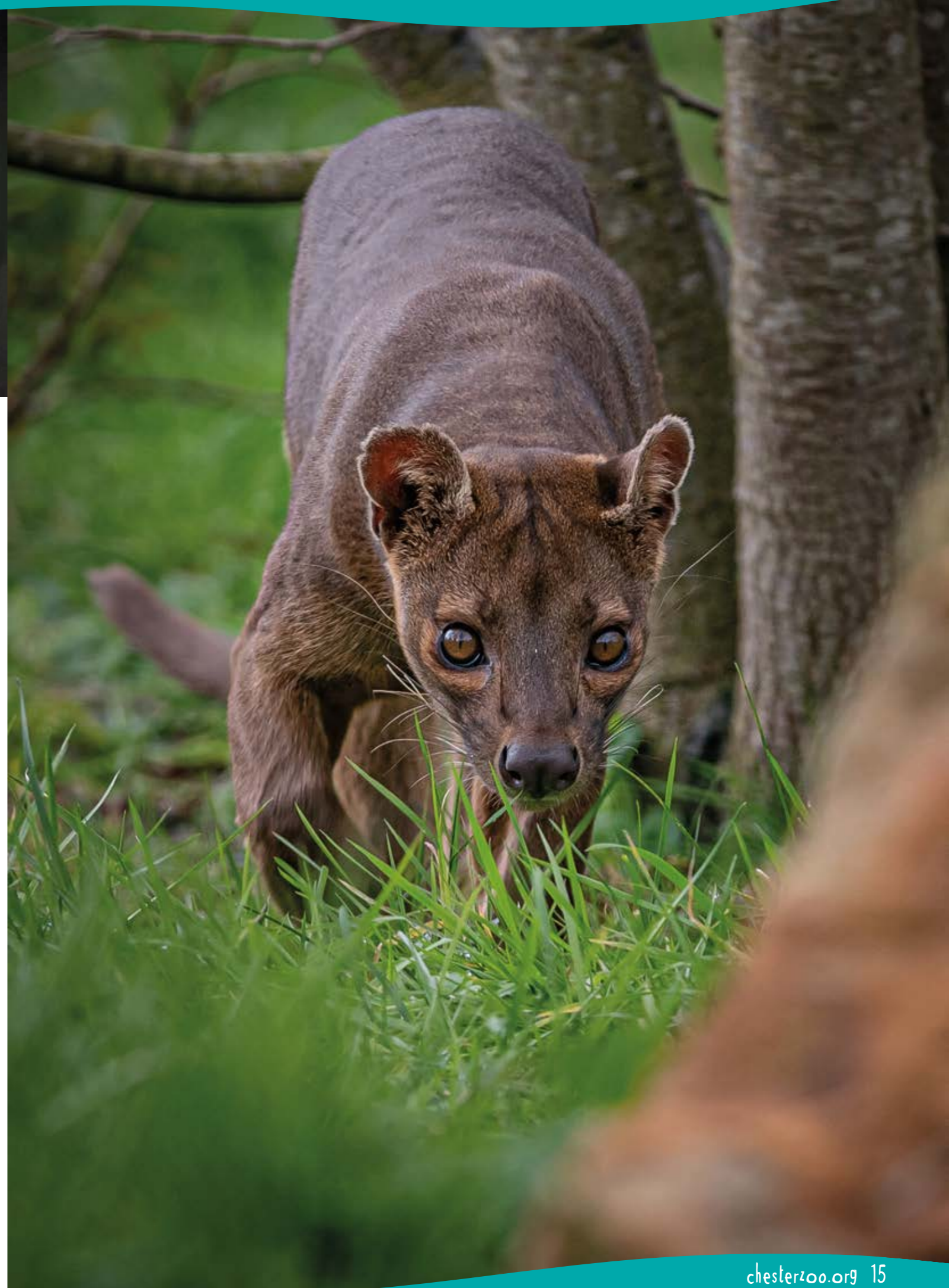
Three new Madagascan species were added to the reptile and amphibian collection in 2020, the Madagascar reed frog, Western girdled lizard and Ibity ground gecko, and our Parson's chameleons produced a good clutch of eggs which will be incubated for up to 18 months before they hatch. Another important Madagascan species at the zoo is the white-belted ruffed lemur and our spirits were lifted when one of our females had three babies, providing a timely boost to the international

breeding programme for these critically endangered primates. We also had the successful birth of an endangered black lemur and our ring-tailed lemurs gave birth to twins, whilst off show our Malagasy narrow-striped mongoose gave birth to young, a first breeding for us here at the zoo.

In Mauritius, a man-made disaster caused the biggest threat to wildlife in 2020 when on 25th July a cargo vessel ran aground on the reef in the South East of the island, just 2km from one of our supported projects at Isle aux Aigrettes. By 6th August oil had begun leaking from the vessel into the lagoon threatening not just marine wildlife but also terrestrial species living close to where the oil was washed up on the shoreline. With financial help from their supporters including ourselves, our partners at the Mauritius Wildlife Foundation (MWF) sprang into action and their teams removed 12 Olive white-eyes (20% of the known population), 6 Mauritius fodies, 5 Radiated tortoises, 54 Aldabra giant tortoises (<5 years old), 4 Mauritius fruit bats, and 4,000 plants to the mainland as a safety net in case the island became flooded with oil. In total an estimated 800 tonnes of oil leaked into the lagoon, but thankfully the remaining 3,000 tonnes on the ship was pumped out preventing further spills. Many MWF staff were redeployed to support various clean-up and rescue operations throughout this time. The clean-up operation continues and it is anticipated that the rescued wildlife will be returned soon.

Elsewhere in Mauritius, the breeding season for the endangered echo parakeet was successful with over 300 eggs laid and 230 chicks confirmed to have hatched to-date. Easing of travel restrictions later in the year has allowed a new Conservation Scholar to arrive in Mauritius and begin working with the echo parakeet team on her first field season.

Meanwhile, in Rodrigues further work took place in the Grand Montagne Nature Reserve to restore the native flora, with 6,925 seedlings of 24 native and endemic species planted, all of which were propagated in the MWF nursery. Counts of Rodrigues fruit bats also continued and MWF staff were able to use the increased time spent indoors due to Coronavirus restrictions to develop a new database to record in detail roost locations, extent, main vantage points and all known bat flight paths.





Biological monitoring of the Chester Zoo nature reserve during the crucial spring period was disrupted by the first lockdown, but thanks to our partners at rECOrd we made up for lost time in the summer and completed surveys for flowering plants, birds, amphibians, dragonflies, butterflies and day-flying moths, bees, wasps and hoverflies. They revealed a continuing increase in biodiversity at the site with a total of 341 species identified of which 65 were new to the site (an increase on 2019 when the figures were 272 and 49 respectively). Highlights included over 200 common toads gathering in the main pond to breed in March; 12 species of dragonflies, with numbers representing a 49% increase since 2017; 24 butterflies and day flying moths (up from 17 in 2019); and the first record for Cheshire of a nationally notable species of bee, *Stelis phaeoptera*. During the November lockdown an hour long Facebook live special was delivered from the nature reserve covering everything from pond life to camera traps and mammals as well as birds and galls.

Elsewhere on the wider zoo estate, we began work to improve the management of our field margins and hedgerows for wildlife after our successful application for Environmental Stewardship from Defra. Camera trap monitoring on the zoo estate during lock down has revealed a wealth of nocturnal species including polecat, badger and fox cubs, barn and tawny owls and the elusive woodcock. Some interesting predator-prey footage was also captured across a range of species and was shared on our Chester Zoo Science twitter feed.

Our Botany and Horticulture team continued their work with 270 native trees and plants, nurturing them in polytunnels ready for planting out in the wild in 2021 in collaboration with local partner organisations. Species include scarce trees like black poplar and native whitebeam species, the endemic wild cotoneaster (confined to the Great Orme in north Wales) and our native bluebell which is sadly declining due to habitat loss and competition from imported non-native varieties.

2020 was a significant year for the restoration of peatlands in the north-west of England as we continued to contribute to species reintroductions in these important habitats. The Large heath butterfly project continued with further releases of 45 pupae to suitable sites around Manchester in the summer, and through our partnership with the North West Rare Plants Initiative the success of previous reintroductions of carnivorous plants was revealed. After an absence of over 150 years, the great sundew is now firmly back in the Manchester Mosses following reintroduction in the previous year, with surveys in 2020 confirming the population had quadrupled in size. Even greater success was recorded for another carnivorous plant, the lesser bladderwort, when monitoring yielded a count of 200,000 individual plants across all sites, a massive increase after an initial reintroduction of just 60 plants in 2018. These successes led to local and national TV coverage and contributed to our main partner receiving environmental awards from the Liverpool Echo and the Chartered Institute of Ecology and Environmental Management.

In the zoo we welcomed Britain's only venomous snake, the adder, to our collection. These can be seen next to the sand lizards near to the exit from the aye ayes. We are also rearing one of Europe's most threatened amphibians, the Montseny brook newt from northern Spain, and in 2020 they had a successful breeding season in preparation for planned reintroductions in the coming years.

For the last six years we have supported the Vincent Wildlife Trust's Pine Marten Recovery Project and in their final report they highlight its achievements. After the project translocated 51 individuals from Scotland to Wales and subsequent monitoring revealed the birth of at least 36 kits (young) in the wild, the report concludes that a core pine marten population is now established in mid-Wales and is expanding north and south along well-connected woodland corridors. This is a fantastic achievement for one of our most charismatic mammals that is now returning to a region where it has been at extremely low levels for decades and we are proud of the part we have paid in preventing its extinction in Wales.





## Wildlife Health and Wellbeing

All of the staff that work to safeguard the health and wellbeing of the animals under our care at Chester Zoo gain valuable skills and experience that not only contribute directly to conservation through the animals we keep, but can also be applied in many of our overseas programmes with our partners. At the zoo we have been studying the epidemiology and genetics of avian malaria amongst mosquitoes; a useful insight in determining successful prevention and treatment amongst birds in our breeding programmes and also its occurrence in wild birds.

At the end of the year we also had to deal with the threat of avian influenza which was diagnosed in birds very close to the zoo, compounded by all of the issues associated with staff biosecurity due to the SARS-CoV-2 pandemic. In addition to all of the staff biosecurity measures to safeguard their health, we also introduced enhanced biosecurity as a precaution for other species of animals which might possibly be at risk from coronavirus, including primates, carnivores and our bats. 2020 was a productive year for scientific publications from Chester Zoo staff and scholars, including three significant ones on Asian elephants: a paper on their sleep behaviour; another on our successful treatment of a clinical EEHV case in Indali in 2019; and a PhD thesis on welfare from an in depth study of the Hi-way family.

Work on the health and genetics of mountain bongo centred on the Mount Kenya Wildlife Conservancy where large numbers of animals are kept and bred with the intention of conservation releases back onto Mount Kenya. One of our Conservation Scholars submitted his thesis on the genetics of this species and his research supports the Mountain Bongo Recovery and Action Plan. We hope the links we have forged during the year will see us more involved in this species in the future. Unfortunately some of our normal capacity building activities had to be postponed, affecting both our staff travelling and also the number of visitors who we could host to train. We look forward to hopefully expanding these activities again during 2021 if circumstances improve.

## Biodiversity survey and monitoring

Survey work is often neglected and under resourced as organisations focus on human communities or threatened species actions. However, often it is essential to understand the biodiversity of an area and species abundance in order to be able to prioritise actions and focus attentions on the most urgent needs. Our staff possess many of these skills and experience to carry out this work and empower others to do the same. This has been difficult during 2020 as many of the planned activities to bring these skills to the field were postponed as travel restrictions swept around the world. Despite this, work has gone on early in the year and through the partners we work with in other countries.

Some very diverse and numerous groups can be very challenging to survey and identify due to the sheer numbers of individuals recorded and the difficulties in identifying many very similar species. In East Africa we again assisted in butterfly and moth surveys, using specially constructed netting traps and baits to catch tropical forest butterflies and specialist ultra-violet emitting lights to attract moths at night. Camera trapping is a technique we use widely for capturing data on larger mammals and a number of studies have continued during the year at our field sites in Africa and Asia. In the Gabon continuation of our gorilla and large mammal survey produced large numbers of images of at least 30 different mammal species, including Western lowland gorilla,

chimpanzee, giant pangolin, white-bellied pangolin, forest elephant, leopard and the elusive Peter's duiker; a very small antelope only occurring in a small part of equatorial Africa. In Kenya camera traps were used to regularly monitor all eight of the Eastern black rhinos resident in Chyulu Hills National Park.

The post-release monitoring of thousands of Bermuda snails involved tiny numbers being affixed to the shells so that snails could be surveyed to help understand movement and mortality in released populations. This detailed information is vital for refining techniques to be used in future release programmes.



## Human-Wildlife Conflict

**Human-wildlife conflict is one of the most widespread and pressing conservation challenges today. It presents a serious concern not only for many species but also affects millions of people in almost every country, putting at risk the livelihoods and safety of many communities around the world.**

Chester Zoo has been working on human-wildlife conflict and coexistence for two decades, working in partnership with the University of Oxford's Wildlife Conservation Research Unit (WildCRU). Our senior conservation fellow, Alex Zimmermann, who leads this partnership, published an important paper on this topic in 2020 in the journal *Conservation Science and Practice*. Using examples from some of our own conservation projects, the paper proposes a hierarchy of three levels of conflict from disputes, through to underlying and deep-rooted conflict. Ideas from international relations and peacekeeping are used to propose long-term solutions. This paper is expected to make a significant contribution to designing policies and practices for human-wildlife conflict resolution throughout the world.

Our long-standing support for the Anteaters and Highways project in Brazil has contributed to the completion of data gathering to understand the causes and impacts of wildlife mortality on highways, and the team are now preparing to convert their data into mitigation strategies. They have been able to calculate the financial cost of wildlife collisions to the local economy and use this to estimate how quickly the costs of implementing mitigation measures along the highways could be paid off. This is helping to inform local authorities responsible for introducing measures to protect both drivers and animals such as anteaters from collision.

## Livelihoods and Sustainable Development

**We support and promote using nature to find more sustainable ways of making a living for people living alongside wildlife in a number of our field projects. One potential source of income comes from honey production through the promotion of bee keeping which has proved successful in several Latin American projects.**

In Bolivia, where we are working to protect Andean bears, an alternative livelihoods programme enabled participants to continue maintaining their community apiaries during lock down, allowing 1 tonne of honey to be harvested by the end of 2020. This has proved vital in maintaining incomes and reducing the impact of local communities on the surrounding forest which is an important habitat for the bears and other species.

In Brazil where we are supporting our partners to protect the giant armadillo the problem had been armadillos destroying the hives to raid the honey, but working with beekeepers to find safe ways of protecting the hives has led to six beekeepers becoming certified to produce giant armadillo-friendly honey, with more expected in 2021. Work also began on preparing an app to help beekeepers to monitor their hives and collect data for a research study.

Our work on promoting sustainable palm oil continued despite the lockdowns and we were able to support a number of other towns and cities who are preparing to join Chester and become sustainable palm oil cities through procurement of products from sustainable sources by local businesses. A grant from Ferrero UK enabled us to appoint a sustainable palm oil city officer to continue this work into 2021.

## Visitor & Community Engagement

**Our safari ranger programme has been running for over 10 years now and objective evaluation has been an important component to ensure that we design our workshops in ways that achieve the maximum possible impact.**

We were therefore delighted to be able to publish our latest research on this in the *Journal of Zoo and Aquarium Research* in 2020 from a study of 445 students in seven of our participating schools. Results showed a 60.5% increase in understanding of conservation and a 24% increase in knowledge of pro-conservation behaviours as well as positive attitudes towards conservation self-efficacy. The study demonstrates how effectively repeat engagement in-school activities can achieve improvements in conservation awareness and contribute towards our mission. Although actual visits to schools by our safari rangers were curtailed

during lockdowns in 2020, our education outreach continues through virtual school visits, enabling us to adapt this important work.

Our conservation social scientists were commissioned by the Disney Foundation and WAZA to evaluate their Nature Connect programme. This has funded over 50 zoo-based projects globally to increase family connectedness to nature, increase time spent in nature, and integrate pro-nature behaviours into day-to-day life. This included our own family wildlife club project which was supported by the fund and worked with 146 people from 53 families who together took over 620 positive actions to support biodiversity. Looking at all the projects worldwide, our researchers found positive, significant changes in participants' connection to nature between pre- and post-tests, demonstrating the value of zoo engagement with families. They are now preparing to publish this work in 2021. Through this work the team have developed new research tools that we will use in future to evaluate more of our own engagement projects.

# Covid-19 Response

**Our response to Covid-19 began early in 2020, ensuring that we were able to protect both our team, and our visitors.**

Multiple Covid-19 controls and contingencies were developed across the organisation. They included an organisational Covid-19 risk assessment, which has been regularly updated. Importantly Covid-19 was formally incorporated within the Society's governance framework with the addition of a COVID Policy issued to all employees in July 2020. This was updated and re-circulated in October 2020 with the introduction of additional responsibilities for some roles in line with legislative requirements within the Health Protection (Coronavirus) Regulations 2020.

Throughout the year, key document and modules were maintained:

- Covid-19 Tracker
- Covid-19 Policy
- Operational Rationale
- Organisational Covid-19 Risk Assessment
- Departmental Covid-19 Risk Assessments
- Covid-19 All Employee Induction

In addition the fundamental operational measure to ensure both a safe and enjoyable experience for visitors has been the deployment of the Welcome Team at indoor spaces and key locations throughout the zoo. Adopting a "One Team" approach, colleagues across all divisions and at all levels have helped with this.

Our Covid-19 tracker is the record of all significant Covid-19 events including legislative/guidance updates along with the organisation's response.

The Operational Rationale which has been in place since the zoo first re-opened in June 2020 sets out the overarching methodology and approach to mitigating the Covid-19 transmission risk and operational plans. The Rationale (and its updates) have been sent to the local authority as well as NEZS Insurers along with the Organisational Covid-19 Risk Assessment.

A Covid-19 Induction was initially delivered as a live webinar and placed on the internal intranet for employees to access afterwards. Following a number of legislative and operational changes all employees were asked to complete an updated version via e-learning.

Cheshire West & Chester Council Environmental Health Officers accepted an invitation to visit the zoo prior to

re-opening in June 2020 and were given a tour to see the range of safety and control measures in place. Following the visit Cheshire West & Chester Council sent a letter confirming the zoo's plans were robust and expressing confidence that the public health risk would be controlled.

In addition to the above, the main Employee and Visitor Covid-19 mitigation measures that have been implemented are set out below. A Directors/Senior Managers Group has convened regularly since the start of the pandemic to manage the Covid-19 situation within the organisation initiating and supervising a range of measures, which included:

- Work from home where possible
- Travel and face to face meetings restricted
- Office one-way systems
- Designated Team Rest/Welfare spaces
- Team splitting and Team pairings
- Issue of face coverings
- Enhanced cleaning schedules implemented and records kept
- Regular communications from the CEO/COO to all employees since the start of the pandemic
- Applicable COVID-Secure guidance has been followed
- Sector specific guidance considered and followed where appropriate (British and Irish Association of Zoos and Aquariums / Association of Leading Visitor Attractions / UK Hospitality)
- "Visit Safely" section and Visitor Charter on the zoo's website
- Restricted numbers in the zoo each day
- Toilets and indoor spaces capacity managed (by Staff)
- Welcome Team Pack and training rolled out
- Daily (pre-opening) briefings
- Pre-booking only for Standard (non-member) visitors
- Members booking at peak times (Summer, School Holidays)
- Visitor and Member FAQs on the website
- Visit video on website
- "Staying COVID Secure" confirmation/certificate published on website (signed by CEO)
- VisitEngland "We're Good To Go" accreditation
- Pre-visit emails
- NHS Test and Trace compliant
- Monitoring of household mixing and "Rule of 6"
- Regular tannoy safety announcements across the zoo
- Big screen messaging at zoo entrance
- Dedicated Forecourt Manager at entrance
- Signage / Screens / Floor markings / One-way systems



# Health & Safety

**Although Covid-19 has had a significant impact and provided exceptional challenges from a health and safety perspective, there has been good progress against areas of focus set out in the 2019 Annual H&S Review.**

The pandemic has presented opportunities for the Safety Team in relation to bringing health and safety to the forefront of everyone's minds, the need to provide practical solutions to operational challenges and being seen to be enablers with increased visibility across the organisation.

A lot of focus has been on supporting the zoo with its Covid-19 response making sure it is robust and effective. A good connection with Cheshire West and Chester Council (CWAC) has been important when communicating the measures taken to mitigate the transmission risk of Covid-19 at the zoo.

A new health and safety policy was signed off by the Executive and Trustees which establishes greater clarity in terms of roles and responsibilities moving forward.

Communication and roll out has begun which will support the H&S safety development plan delivery in 2021.

Progress has also been made in 2020 in improving fire safety management across the organisation. The importance of the work of the Fire Safety Advisor was acknowledged and the role was not furloughed in the first national lockdown due to the requirement to continue with the programme of Fire Risk Assessments (FRAs) in compliance with current fire safety legislation.

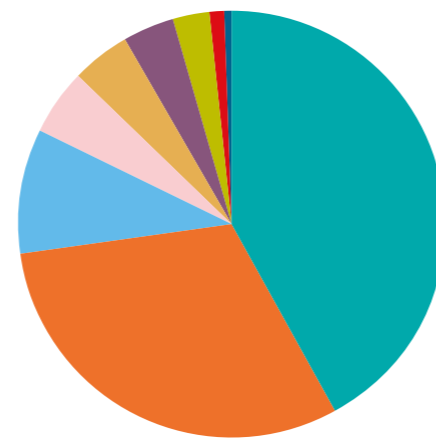


# Our Sustainable Zoo

The Society's energy usage, and carbon footprint, within the United Kingdom for the year ended 31st December 2020 is set out below. This usage includes Scope 1, 2 and, to some extent, scope 3 emissions data.

Energy consumption used to calculate emissions		15,067,759 kWh
Emissions from combustion of gas	Scope 1	1,090 tCO2e
Emissions from combustion of LPG	Scope 1	161 tCO2e
Emissions from combustion of oil products	Scope 1	333 tCO2e
Emissions from combustion of fuel for transport purposes	Scope 1	42 tCO2e
Emissions from refrigerants	Scope 1	15 tCO2e
Emissions from purchased electricity	Scope 2	1,486 tCO2e
Emissions from water supply and treatment	Scope 3	182 tCO2e
Emissions from transmissions and grid losses	Scope 3	128 tCO2e
Emissions from air & rail travel	Scope 3	100 tCO2e
<b>Total tCO2e based on the above emissions</b>		<b>3,537 tCO2e</b>

tCO2e by type of energy consumption



- Emissions from purchased electricity 1,486
- Emissions from combustion of gas 1,090
- Emissions from combustion of oil products 333
- Emissions from water supply and treatment 182
- Emissions from combustion of LPG 161
- Emissions from transmissions and grid losses 128
- Emissions from air & rail travel 100
- Emissions from combustion of fuel for transport purposes 42
- Emissions from refrigerants 15

As an indication of the intensity of the Society's carbon footprint, based on the above data the following ratios have been calculated:

kgCO2 per zoo visitor	2.99
kgCO2 per acre of zoo land (excludes the Society's wider land holding)	22,104

## Energy efficiency actions

During 2020 we undertook a number of maintenance and operational projects which look to reduce our energy and carbon usage, improving our sustainability.

We started a programme to install sensor taps to minimise water usage across public toilet facilities, and re-engineered our boat ride water supplies so we can use the existing water to refill the channel. In our penguin pool we upgraded the plantroom filtration system to reduce the amount of water changes required and we upgraded our fish kitchen to change the fish thawing process, saving large volumes of water.

We're in the process of changing our fleet vehicles from diesel to electric and we've installed more electric vehicle charging points, plus additional infrastructure to add more. We are installing more solar bollards to pedestrian pathways within the zoo to provide our external lighting, and over the last two years we've been changing to LED lighting. As our gas boilers become due for replacement we're upgrading to more efficient models.

Our buildings are seeing energy efficient improvements too – we've added insulation to the monkey house to improve the thermal property and save heating costs and energy; and replaced part of the roof of the tropical house, again improving light quality and thermal performance.

# The Re-opening of Monsoon Forest

Following the fire in December 2018 it has taken 22 months to restore Monsoon Forest and re-open the building to the public.

Monsoon Forest is the UK's largest indoor animal exhibit and the reinstatement works were very complex. In addition to destruction of Tripa Research Station and the roof to the southern half of the building, much smoke damage occurred throughout the main structure.

By the end of 2019 the whole roof had been replaced and the building made weathertight once again. Early 2020 saw the reconstruction of all services and heating; ventilation and other systems were linked back into the plant room equipment which had remained relatively unscathed.

The generosity of the public in the days and weeks following the fire supported improvements in the habitats and facilities for the species most affected: an additional aviary adjacent for the Rhinoceros hornbills' aviary, a new exhibit within Tripa Research Station currently housing Emerald tree skinks and Vampire crabs, improvements to Primate facilities – including the addition of feeders to simulate natural foraging and provide enrichment and improvements to netting and containment for the free flight birds area.

We also extracted over 1600 tonnes of soil and substrates and reinstated fresh material into the building to improve the soil composition and to deepen the planted beds to achieve better plant growth and more suitable conditions for the free flight birds. The Nursery team designed the planting and identified over 2,000 specimens required to replace what had been lost.

When the first Covid-19 lockdown occurred, the combined efforts of zoo staff and the UK contractor saw batched delivery of hundreds of very large trees which had to be lifted up to 8 metres off the ground and located precisely and in a specific planting sequence. The whole exercise was completed in 2 months and has delivered an interior landscape that looks very mature after only 3 months' growth.

Simultaneously, keeping staff and curators were fitting out enclosures, maturing environments and making general preparations prior to bringing each species over to Monsoon Forest. Throughout September and into October animals were reintroduced into their environments and monitored before the building re-opened to the public on 24 October 2020.



## Additional Projects Within the Zoo

The removal of the monorail started at the end of 2019 and continued in early 2020 with the demolition of the two stations and lengths of track adjacent to the Madagascar walkthrough and the stables lawn area. Work was put on hold at Easter 2020 due to the zoo being closed and uncertainty of funding, as a result of the pandemic.

The new facilities management building located alongside the A41 was completed in early 2020. This will allow the refurbishment of the grade 2 listed stable block to complement the zoo's heritage zone, located alongside The Oakfield, once our Strategic Development Plan re-starts and funding allows.

The construction of the Latin American Wetland Aviary was severely delayed due to Covid-19 and prioritisation of resources elsewhere. It is planned for opening in spring 2021.



## Conservation Breeding and Management

**This year brought many unforeseen challenges, especially biosecurity and travel and movement restrictions which affected many of our normal activities and of course our ability to open to our visitors.**

Despite these our conservation breeding and management activities within the zoo carried on largely as normal, with the needs of our animals paramount despite the difficulties at times. All of the conservation breeding programmes in which we participate carried on despite Covid-19, and whilst moving animals in and out of Chester was challenging at times our breeding success reflects the continued high standards of health and care during 2020.

New births and hatchings in our Asian elephants, Eastern black rhinos, Western chimpanzees, Bornean orangutans, Visayan warty pigs, okapi, great green macaws, Mexican leaf frogs, Lake Titicaca frogs, Montseny brook newts, Bermuda skinks, Chinese crocodile lizards and many other species show just how much was achieved in all these programmes that are critical for preventing extinction of these species and preserving options for future conservation action both in the zoo and/or the wild.

We again pioneered work at the interface of ex situ and in situ conservation, contributing to species action planning, such as the bleeding toad and harlequin frog, which sets the road map for future conservation. Whilst despite the huge difficulties with movement of animals and people we carried out reintroductions for large heath butterfly, greater Bermuda snail and for the first time ever, a lesser Bermuda snail.

## Our Work on EEHV

**Elephant Endotheliotropic Herpes Virus (EEHV) is a potentially lethal virus that causes fatal haemorrhagic disease in up to 80% of elephants that contract it, with serious consequences on herds like ours at Chester. Until a few years ago very little was known about the elephant's immune response to this virus and effective treatments and vaccines were a distant dream.**

Thanks to the incredible generosity of so many donors to our 'Never Forget' campaign, we have been able to work with top experts at the University of Surrey and the Animal & Plant Health Agency to study this virus. After four years of research we now have more effective treatments and we are tantalisingly close to developing the first vaccine to protect elephants against the lethal effects of EEHV.

Vaccination is the method of choice for prevention of viral disease in most species. The inability to culture EEHV in the laboratory has, to date, prevented the development of traditional live-attenuated or inactivated vaccines. However, advances in DNA technologies, similar to those used to develop Covid-19 vaccines, have opened new perspectives for EEHV vaccine development.

Immunity against herpesviruses particularly relies on the activation of a crucial part of the immune system, namely the T cells. After many months of research, we have narrowed down a number of antigens (proteins produced by EEHV) that we believe will be the most effective in producing a T cell immune response. We have also found a safe vector which is a version of another virus that can be modified to carry elements of the EEHV DNA and stimulate the elephant's T cells into producing an immune response. The production of an effective vaccine requires development and testing of successive versions of the

vaccine in order to come up with the combination of antigens producing the best immune response.

The first version of this vaccine combination has been chosen (V1) and is currently in production and we are hoping to trial the V1 vaccine during 2021 and test its efficacy at eliciting an immune response in adult elephants. The next step then is to repeat the process with a V2 vaccine containing two new antigens. V1 and V2 will then be compared and the antigens eliciting the best response will be used for the production of the final version of the vaccine.

We will also be looking to develop additional novel tests that will improve our knowledge of the elephant immune system and its response. This will add to and improve our ability to assess elephants' immune response and ensure the production of the most potent vaccine.

We hope that a maximum of three rounds of antigen selection and optimisation should suffice to create an effective vaccine that elicits an immune response and prevents EEHV induced haemorrhagic disease in elephants. Ironically the fight against another deadly virus, Covid-19, has held up EEHV vaccine development and testing during 2020 but we are hopeful that we can resume the vital testing work in 2021 and find a lasting solution to controlling this disease.



of closure (£2.8m), together with the government's Job Retention Scheme grant (£1.8m) the Society would have recorded a significant deficit for 2020. We are incredibly grateful for this support.

**Incoming resources**

The majority of the Society's income comes from the zoo's visitors and members, in the form of admissions and other charges.

Having reached a record 2,086,785 in 2019, visitor numbers for 2020 fell by 43% to 1,182,652. In 2020 36% of visits were made by members (2019: 34%).

Having risen consistently year on year for over 10 years, membership numbers fell by 8% to 120,539 (2019: 129,483) during the year. We are incredibly grateful to those members who continued to support the zoo financially during a very difficult period.

Our winter Lanterns event, which was due to start in November, was delayed until December and with reduced capacity attracted 77,000 visitors (2019: 111,000 visitors). There was a significant decrease in the number of education visitors, with 33,000 visiting compared to 132,000 in the previous year. Of those visits 27,000 visited for free (2019: 42,000) in the winter months under an initiative launched in 2017.

Total visitor related income for 2020, which includes admission fees and membership income, fell by 32% to £20.7m (2019: £30.6m).

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 general admission fell by 37% to £1.8m (2019: £2.9m) reflecting both the reduction in visitor numbers and also a move to require all visitors to book tickets online where the propensity to donate and Gift Aid reduces.

Fundraising income, which includes animal adoptions, grants, legacies and other donations increased significantly to £5.4m (2019: £1.2m).

During the first lockdown the Society launched a Save Our Zoo campaign and raised £3.3m. We were overwhelmed by the level of public support and generosity at a time when the majority of the zoo's sources of income had stopped. Animal adoption income rose to £1.2m (2019: £0.3m) with over 22,000 adopters supporting the zoo and its work.

The Society's trading subsidiary, Chester Zoo Enterprises Limited, which provides retail and food & beverage offerings across the Zoo site had a income of £6.8m in 2020 (2019: £12.7m), having been significantly impacted by the periods of closure and limits on visitor numbers and the restrictions around indoor restaurant space.

**Resources expended**

In 2019 the Society spent £36.0m (2019: £43.5m, excluding £0.9m of exceptional costs relating to the Monsoon Forest fire). These figures do not include capital expenditure. Due to the reduction in income the Society undertook a review of its expenditure during 2020 and reduced spend across the organisation, including the funding for charitable activities.

# Financial Review 2020

**The financial performance of the Society for the year ended 31st December 2020 was significantly impacted by the Covid-19 pandemic. The zoo was closed for almost four months during 2020, and for the vast majority of the time it was open, visitor numbers and hence income, were constrained.**

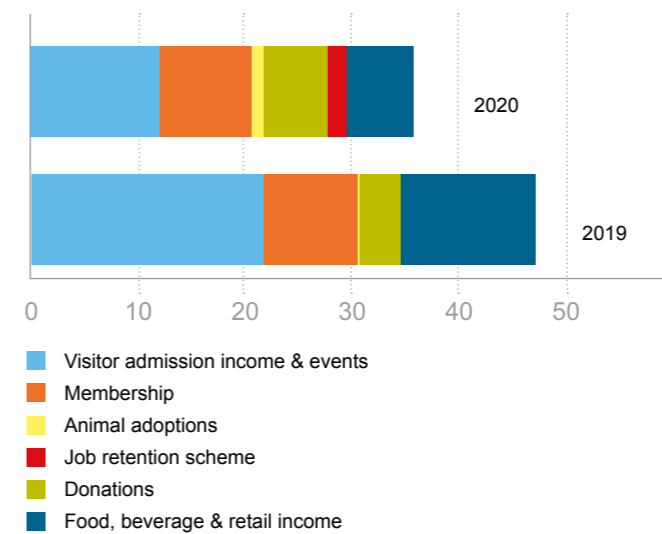
Total income including donations and grants for 2020 was £36.1m, a reduction of £11.3m from 2019's underlying income of £47.4m (2019 total income of £55.1m included £7.7m of exceptional income receivable from insurers in respect of the Monsoon Forest fire).

Expenditure for 2020 was £36.0m, a reduction of £7.5m on 2019's underlying expenditure of £43.5m (2019: total expenditure of £44.4m included £0.9m of exceptional costs relating to the Monsoon Forest fire).

With the reduction in income greater than the reduction in expenditure, reflecting the level of the zoo's fixed cost base, the Society reported a net £0.1m increase in funds for 2020 significantly lower than the £10.8m increase in funds reported for 2019, which included a £6.8m net increase in respect of the Monsoon Forest fire insurance claim.

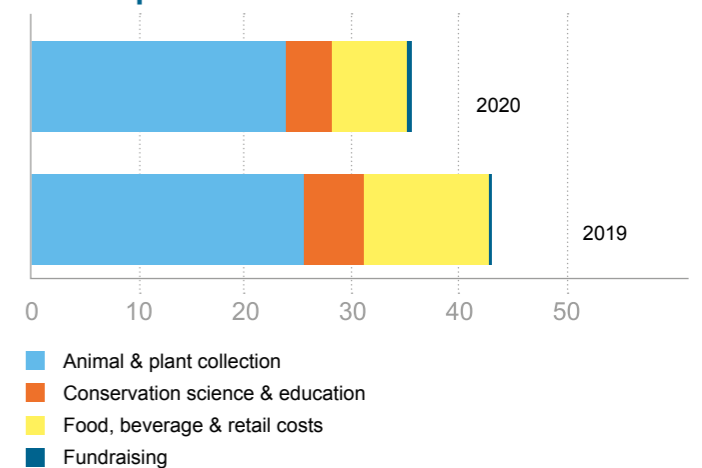
Without the generous support of the public through the Save Our Zoo campaign (£3.3m), animal adoptions which reached record levels (£1.2m) and membership support during periods

**Our Income £m**



2019 income excludes income from Monsoon Forest fire insurance claim

**Our Expenditure £m**



2019 expenditure excludes costs related to the Monsoon Forest fire

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 £28.4m (2019: £31.3m). In addition we spent £0.5m (2019: £0.4m) generating our voluntary income.

Chester Zoo Enterprises Limited had costs of £7.1m (2019: £11.8m), excluding £0.3m of rents paid to the Society (2019: £0.7m). An agreement was reached with the Society to reduce the level of rent payable during the periods of zoo closure and restricted visitor numbers. Chester Zoo Enterprises made an operating loss of £0.6m in 2020 (2019: operating surplus of £0.2m).

By far the biggest element of operating expenditure (2020: £16.0m, 2019: £18.1m) is the Society's payroll cost for its employees, who all work towards our mission of preventing extinction. After closure of the zoo for 3 months in early 2020 the Society undertook a cost reduction exercise which led to 47 employees leaving our employment. The vast majority of these employees left under a voluntary arrangement, with 5 compulsory redundancies. There was also a significant reduction in the number of staff employed under a seasonal contract during the year. Our average Full Time Equivalent (FTE) headcount for 2020 was 502 compared with 618 in 2019. In 2020 over half of these employees worked directly in support of the Society's charitable objectives, either with our animal and plant collection or in education, science and research.

### Capital expenditure

As the zoo closed under the first lockdown in March 2020, a stop was put on any capital expenditure other than projects that had already commenced and were part complete.

Of the £7.5m spent in 2020 (2019: £20.4m) £5.7m related to the rebuild of the Monsoon Forest and construction of buildings to house animals displaced by the fire which happened in late 2018. The development of a new Latin American Wetland Aviary continued and the construction of a new maintenance facility was completed.

### Borrowings, investments and reserves

It is the general policy of the Society to apply towards its charitable objectives as much funding 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. The impact of this final risk has been highlighted during the Covid-19 pandemic.

Having considered these factors, and reflecting on the impact of Covid-19, the Society increased the level of minimum available cash reserves it maintains to £3.8m (2019: £1.9m) which are supplemented by a minimum £1.9m of undrawn committed borrowing facilities (2019: £0.5m). Such reserves being sufficient for the zoo to operate without significant curtailment of its activities for a period of up to three months in the unlikely event of no income being received.

At the end of 2020 the Society had borrowed £9.2m and had £5.8m of cash reserves, including £1.7m of cash reserves held in escrow for the defined benefit pension scheme (2019: £12.1m borrowings and £4.8m of cash reserves). At 31st December 2020 the Society's borrowing facility comprised a £22m unsecured revolving credit facility, which is in place until April 2025 and a £2.0m overdraft facility which is renewable annually in August. At 31 December 2020 the Society had access to £14.8m of undrawn borrowings and £4.0m of cash reserves (excluding the escrow account).

### Pensions

The Society's defined benefit pension scheme was closed to future accrual in 2012 and at 31 December 2020 reported a surplus of £3.8m under FRS102 (2019: £3.3m). During 2020, the Pension Trustees agreed to defer a further £1.0m transfer of funds into the escrow account held by the Society. The account, which had a balance of £1.8m at 31st December 2020 is to be used, if required, to fund a buyout of the scheme, when the scheme liabilities would be fully secured with an insurer. The reported surplus, which excludes the amount held in the escrow account, is not recognised in the financial statements as the Society cannot gain economic benefit from it. Any surplus in the escrow account after a buyout will be returned to the Society.

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 enrolled into the NEST pension scheme with contributions in line with government rates.

### Restricted and Designated Funds

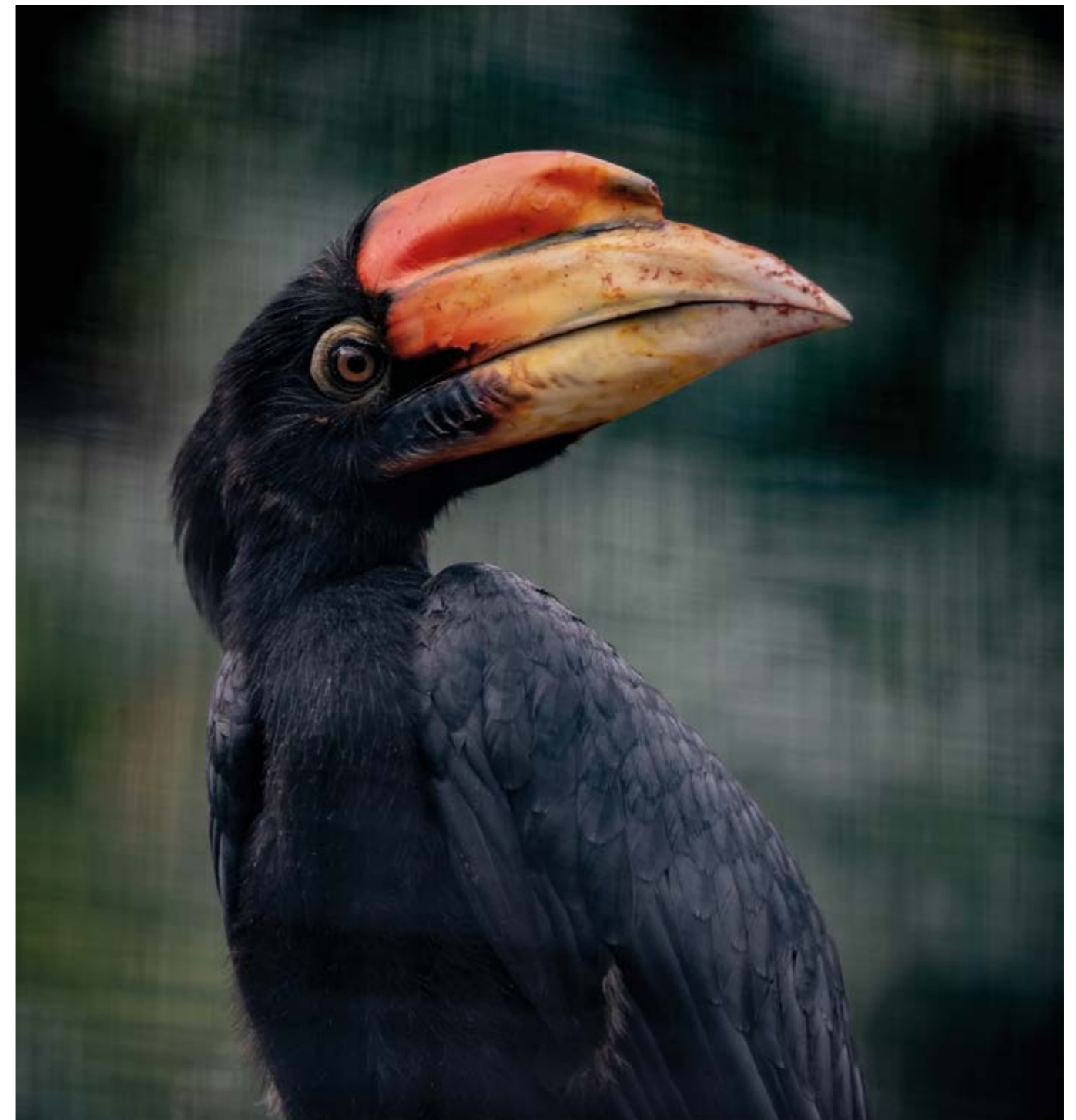
Restricted income funds derive from donations, grants and legacies received and are put towards a variety of specific capital projects and conservation activities. Unrestricted income funds may be designated or freely available for the Society's general charitable purposes.

After setting aside restricted income funds, the Society keeps a minimum cash deposit of £3.8m set aside as a free reserve. The balance of available funds at the balance sheet date are designated as follows:

- to the defined benefit pension scheme; where the Society has a strategy to move the scheme towards a buy-out with an insurer in the medium term;
- 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.

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 2020 the Society had total funds employed of £61.5m (2018: £61.4m) of which £2.2m (2019: £7.7m) were restricted, £3.8m were free (2019: £1.9m) and the balance of £55.5m (2019: £51.8m) were designated.



# Our People

Over 500 people were employed at peak season 2020, with a headcount of 576 (475 permanent, 19 fixed term and 82 seasonal) employees in the organisation. In comparison, over 1,000 people were employed during peak season 2019.

Job roles within the zoo are incredibly diverse; ranging from keepers to chefs, scientists, accountants and retail assistants. As measures were put in place to ensure a COVID secure site, employees from all departments came together to undertake Welcome Team shifts. Customer service and the health and safety of our visitors were our key focus as we reminded our visitors to socially distance, wear face coverings in indoor animal houses and hand sanitise regularly.

Furloughing large quantities of staff for long periods of time whilst the zoo was closed to reduce overheads has been hard for those involved, both physically and mentally. We kept in touch with our staff on a very regular basis, however we know how hard this has been for many. Equally, it has been challenging for those staff who have been continuing to work during periods of lockdown, working with our collection and supporting our mission. Whilst we were open, helping provide reassurance as well as guiding our visitors and members to remain Covid-19 secure has been equally testing.

employees to access further support from their Line Manager, the People Team or Staff Association where required along with promotion of utilising the Medicash EAP helpline.



## Job Retention Scheme

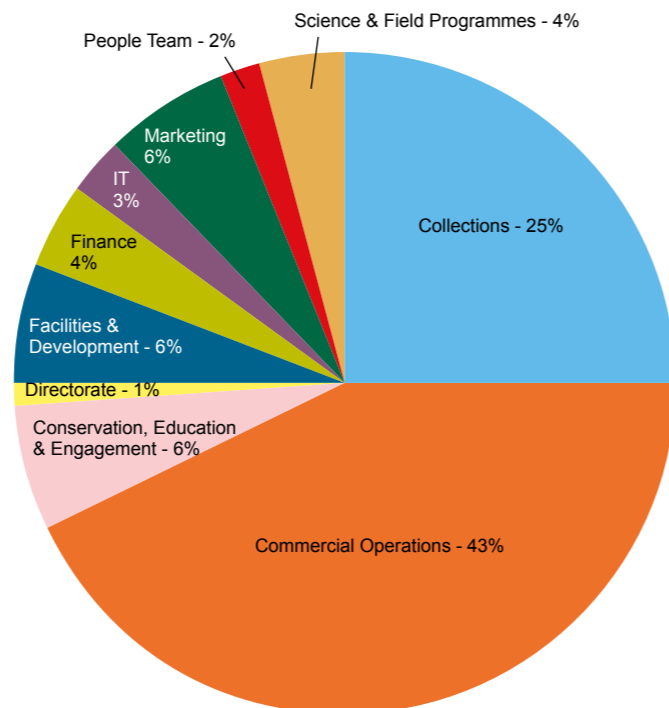
The zoo had two periods of temporary closure during 2020 due to Covid-19 and so the Job Retention Scheme was fully utilised with employees furloughed and an application to HMRC to cover a portion of the monthly wage costs. When flexi furlough arrangements were made available later in the year, this was also utilised to enable employees to work a reduced number of hours and be placed on furlough leave for the remainder. The group received £1.8 million through the Job Retention Scheme in 2020.

## Wellbeing

We have continued to support the wellbeing of employees during 2020. Regular communications have been provided to all staff with clear guidance around the process in relation to Covid-19 and self-isolation, along with regular promotion of the Hands, Face, Space messaging.

Further communications have regularly been provided to all staff which signpost to various resources relating to areas impacted by Covid-19, e.g. supporting those who were adjusting to working from home, supporting those who were furloughed. We also continued to remind and encourage

Headcount by department



# Volunteering

Our volunteers continued to provide fantastic support to the zoo during the year, with 231 people volunteering 14,383 hours of their time to zoo activities, as well as getting involved in fundraising and supporting the zoo's conservation campaigns.

Following reopening in June, visitor engagement volunteers played a key role providing a safe welcome to guests as part of the welcome team. Between them, they spent almost 8,000 hours engaging visitors and helping promote social distancing measures across the zoo. During closures, and throughout the year where volunteers were not able to return to visitor facing roles for health and other reasons, new digital volunteering opportunities were introduced. 40 volunteers donated 267 hours to these micro-volunteering activities including helping to categorise resources, fact-checking signage and taking action for wildlife in their own spaces and communities.

Using a combination of digital and in-person volunteering opportunities when possible, eight students completed their Duke of Edinburgh volunteering with us during the year.





## Learning and Development

**351** individual learning experiences have taken place during 2020, ranging from WorldHost “Ambassador” customer service training, the Line Manager Development Programme to Level 3 Safeguarding Awareness for our Designated Safeguarding Leads and Officers.

**3,037** e-learning courses were completed across the organisation in a variety of topics including GDPR, Computer Security, CDM, Food Safety, COSHH, Modern Slavery and Fire Safety.

### WorldHost Customer Service

Following a review of the WorldHost “Ambassador” customer service training, which was delivered to 399 new and seasonal employees in 2019, we worked in partnership with People1st to design a new bespoke course for Chester Zoo employees in visitor facing roles.

The first session was delivered to 31 employees in February and a plan was in place to deliver to more than 500 employees throughout the spring and summer months. Unfortunately no further sessions could take place due to national lockdown and temporary closure of the zoo.

### “Be the Best” Line Manager Development Programme

This programme was launched in January following a successful pilot in December 2019.

We developed a comprehensive 12 month plan to deliver the programme to over 100 employees from grades 7 – 11 with

direct line management responsibilities (plus assistant team managers). Our first cohort successfully completed all three modules. Cohort two completed modules one and two but unfortunately the programme was halted in mid-March. This programme will be rolled out virtually in 2021.

### Safeguarding Training

**20** employees from across the organisation have been identified as Designated Safeguarding Leads (2) or Designated Safeguarding Officers (18).

They completed an eLearning course before attending a full day virtual training session (Level 3 Safeguarding Children and Adults) during the November lockdown period. The sessions were delivered by Cheshire West and Chester County Council Safeguarding Partnership.

This will continue in 2021 as 60 employees will complete the Level 2 course.

### eLearning

**3,037** courses were completed across the organisation in a variety of topics including GDPR, Computer Security, CDM, Food Safety, COSHH, Modern Slavery and Fire Safety.

This figure includes 580 employees and interns who have completed the bespoke Covid-19 Awareness eLearning course written by the Health & Safety team and designed by the Learning & Development team.

## 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.

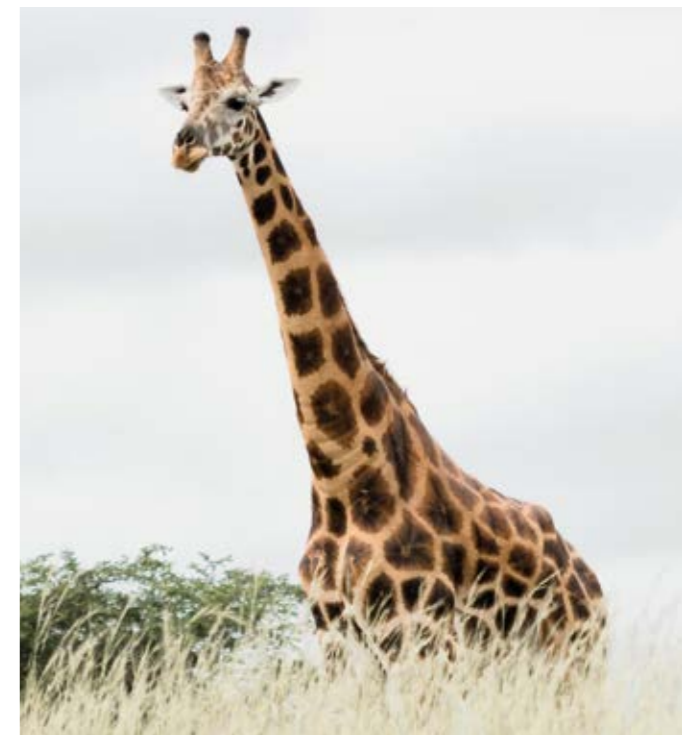
As a large charity, the Society publishes a Gender Pay Gap report, the results of which highlight the equal opportunities available regardless of gender. Details of the report can be found at [www.chesterzoo.org](http://www.chesterzoo.org).

## Keeper for a day

**The Keeper for a Day scheme has been running since 1999. Initiated and run primarily by keeping staff, the income generated from the Keeper for a Day experiences has enabled over 300 staff members to attend workshops, conferences and participate on field projects.**

This year, however, as for so many areas of our life and work, has been an extremely challenging year for the scheme. As the pandemic threat became more apparent February and March saw the zoo repatriating all staff in the field, and there has been no international travel for fieldwork since (Keeper for a Day related or otherwise). Furthermore, the scheme’s income, was also curtailed through zoo closures and Covid-19 risk management.

A few fortunate travellers were able to make it to the field in early 2020 though! Three of these were to Uganda participating in our giant pangolin project and working alongside our partners, Giraffe Conservation International and the Uganda Wildlife Authority, on the successful giraffe translocation project in Kidepo National Park. A member of our rhino team also spent time advising, together with the CEO, on potential strategies for exciting plans to potentially reintroduce black rhino back into the country. Our other two



travellers both provided technical support for parrot projects. A member of the IT team installed monitoring infrastructure for great green macaws in Costa Rica, whilst one of our CE&E team provided education strategy support for the Ecuador Amazon project.

The Ecuador Amazon Project was also the planned destination for our Annual Expedition, which is also funded via the Keeper for a Day scheme. The expeditions provide a great opportunity for several staff from a range of zoo departments to engage in our field projects. Unfortunately, this was unable to go ahead in 2020 due to the pandemic.

# Introducing the Chester Zoo Youth Board

**In 2020, Chester Zoo was the first charity zoo in the UK to appoint 13 young people as an advisory board to help enlist their help in the collective fight against extinction.**

Individually, we are 13 young people each with a diversity of skills, specialities and opinions. Collectively, we are a voice for change in the fight for conservation and each hold the same collective goals of representing the voices of future generations, improving relationships between humans and animals on a global scale and educating others to the importance of our mission.

Since our first meeting in March 2020, we have persevered with our targets whilst adapting to the restrictions of Covid-19. The Youth Board meets bi-monthly to discuss, action and respond to the challenges that face our natural world on a daily basis that our generation will be left to fix.

With the incredible support of the Chester Zoo team, we have already made remarkable progress in challenging conversations, aiding decision making and educating the community.

We have assisted with fundraising for Chester Zoo's Save Our Zoo Campaign, helped develop in-house campaigns such as Act for Wildlife & Wildlife Connections, teaming up with other youth-based conservation groups across the UK and globally, pushed for more diversity within Chester Zoo from the top

down, advised other zoos on how they can develop their own youth boards plus many more ongoing projects and work that will collectively add value to the mission of preventing extinction.

For 2021, we are looking forward to presenting a workshop on youth governance in conservation at the global Youth Summit run by the IUCN in April as part of their World Conservation Congress. We will host a range of guest speakers and discussion forum over the space of 2 sessions. We will also be assisting the CE&E team in their careers festival, love it for longer and youth symposium over the next few months. The Youth Board are also working on other exciting targets throughout this year that we can't wait to share with you on our journey as we continue to develop.

I am unbelievably proud to have chaired the Youth Board over the past 12 months. Each member brings their own perspective to the group but has the same best interests of Chester Zoo at heart. It's a true reminder that incredible things are accomplished when great ideas come together.

*Chelsie Jones, Chair of Youth Board*



## OUR ACHIEVEMENTS IN 2020

### STRATEGIC OBJECTIVE 6: Preventing extinction by being a voice for change

## Conservation Education and Engagement

**Pandemic restrictions, particularly social distancing and school closures, drastically reduced engagement numbers for most of 2020, but particularly through digital means we have found new ways of engaging people with the natural world.**

During the first few months of 2020 the upward trend in educational visits we saw in 2019 continued. There were 26,928 educational visits to the zoo in January and February (a 19% increase on the same months in 2019). However, the impact of coronavirus on schools' ability to visit then took effect and the total number of educational visits to the zoo for 2020 was just 32,827. Of those 7,415 took part in curriculum linked teaching sessions on site.

Throughout the first lockdown we maintained support for education through online resources and supporting educational engagement with the Virtual Zoo Days. We increased the number and variety of resources available through our online resources platform, adapting them for families learning at home. Between March and June we saw a more than six fold increase in views of our learning resource pages (compared to the same period the previous year), with 309,000 views in those months.

When schools returned in September, we launched a newly developed virtual workshop programme, to complement an adapted on-site and outreach offer. Across the Autumn term 5,528 learners took part in virtual workshops, many of these during the November lockdown when the zoo itself was closed.

To enable a more adaptable approach to working with schools, as well as create some efficiencies, our Safari Ranger and Education Officer teams were brought together into one team of Conservation Education Officers. This new team deliver across our outreach, virtual and in-zoo schools programmes and can where needed create flexible programmes of learning including a combination of formats. The education web pages were also reformatted to reflect this joined up and flexible offer,



and to place greater emphasis on our work to support teachers delivering their own conservation focused curricula in schools.

Supporting the development of a conservation curriculum in schools continues to be a core focus. During the year, using virtual means, we continued to deliver teacher training with partners including Ignite TSA and University of Chester. New in 2020, was the introduction of our first Conservation Curriculum Toolkit, produced with education experts and freely available on our new support for teachers web pages, the toolkit includes subject overviews, lesson plans, knowledge organisers and resources.

Our in-zoo engagement work, where normally we provide visitors with lots of opportunities to get hands on with artefacts, enjoy storytelling and talks and ask questions of our expert Zoo Ranger team, has been significantly curtailed by coronavirus restrictions. However, the engagement skills of the Zoo Ranger team were utilised to good effect out in the zoo, engaging with guests and helping to maintain social distancing as part of the welcome team. The team were also able to deliver some specific events for young people including a virtual Summer School for aspiring conservationists, our first skills course for teenagers and several Junior Ranger camps.

The re-opening of Monsoon Forest represented an opportunity for the Exhibitions and Interpretation team to create a new interpretation scheme building on lessons learned from the evaluation of the original installations. As well as showcasing the amazing South East Asian species within Monsoon Forest, the scheme also focused on highlighting the conservation work we achieve in the area and the skills needed to make conservation effective.

Throughout the year we have continued to provide support to field educators around the globe. Early in 2020, our Learning Operations Manager went to work with Big Life in Kenya, supporting them to deliver teacher training and our Conservation Education and Engagement manager travelled to Ecuador to help our partners there develop a new education strategy. Support was then maintained using virtual means and at the end of the year a forum for field educators to come together to share practice has been set up.



## Membership and Adoptions

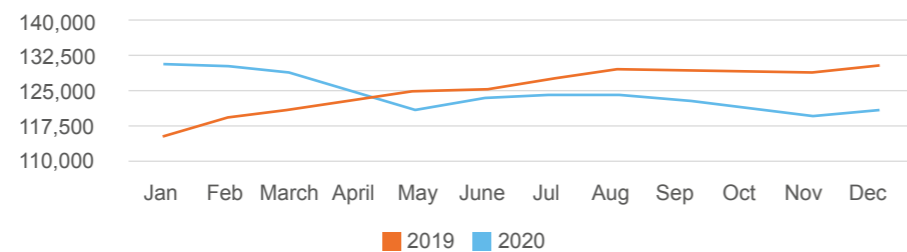
**The support from our members and adopters was truly overwhelming this year and we can't thank them enough for their generosity, words of support and for sticking with us during a really uncertain time.**

We ended the year with 120,539 members, 8% fewer compared with the previous year. Our growth in new memberships is hugely dependent on zoo visits so we had expected some drops in member number in line with our drop in visitor numbers, because of the coronavirus measures.

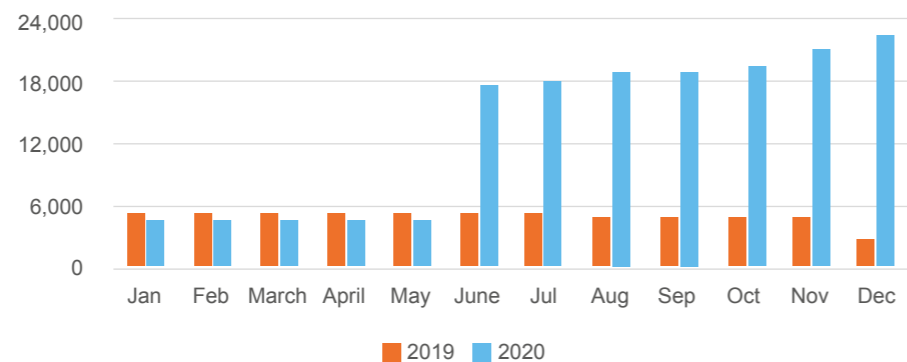
However, during our reopening period in June we saw a 29% increase in sales for the month compared with the previous year showing that new members were really keen to support us and to join us when we reopened the zoo.

We worked really hard to maintain our wonderful connections with our members, introducing large numbers of member booking slots, more online functionality to enable members to manage their bookings (including requesting membership extensions and payment holidays during our closure periods) and even a virtual sneak preview of Monsoon Forest when the habitat reopened in October. We were so delighted to see that members really did want to support us with our renewal rates between June and November 15% higher than we would usually expect.

**Total Memberships vs 2019**



**Total Adoptions vs 2019**



Another real success story of 2020 was the huge increase in animal adopters that joined us this year. Our adopters grew 283% ending the year with 22,718 adopters. Our adopters sent wonderful messages of support and loved that

they could donate to the zoo and to feel closer to their favourite animals during the time that we were closed. To each and everyone who supported us, in any way, thank you.

## Public Affairs

**Our public affairs function was established in 2019, during a year that was shaped by the UK's exit from the European Union and a December general election. If this felt like a period of political turmoil then 2020 proved to be even more so.**

It was, however, a year during which we made significant strides in our efforts to increase our influence within Westminster and Whitehall and become a more prominent voice for change in UK public policy debates.

When the first national lockdown was introduced in March 2020 we began working closely with the professional body for UK zoos and aquariums, BIAZA, to support their lobbying efforts on behalf of the sector. This was a clear example of Chester Zoo playing a leadership role and, as the only UK zoo with a dedicated public affairs function, sharing our expertise with other collections.

We developed a public affairs strategy and helped to put in place decision making structures, designed to support BIAZA's interactions with the UK Government and devolved administrations throughout the Covid-19 crisis. We wrote to Government Ministers and helped to create template resources to allow other zoos to lobby their local Members of Parliament. We also reached out to other membership bodies, particularly those representing the wider tourism industry, to inform and influence their lobbying efforts.

A crucial early step was establishing an ongoing dialogue with key officials within the Department for Environment, Food and Rural Affairs (Defra), which allowed us to keep them informed of the challenges that zoos were facing and the impact that new regulations and restrictions were having. Ultimately, alongside BIAZA colleagues, we were able to escalate our concerns up to ministerial level within Defra and get zoos firmly on the political agenda. Early successes included the likes of receiving official confirmation that zoo staff with direct responsibility for animal welfare were 'essential workers' who could travel to and from work.

Having been consistently told by civil servants that no targeted funding would be made available for zoos and aquariums, our lobbying finally paid off and the Government announced in May an initial £14 million fund for zoos, later expanded to £100 million. This was a major achievement and the fund has supported several zoos facing immediate financial crisis. Sadly though, and despite our concerted efforts, significant media interest, and ongoing pressure from supportive parliamentarians, the effectiveness of the fund continues to be severely hampered by overly restrictive eligibility criteria and a lack of support for the conservation, education and scientific research work carried out by zoos and aquariums. Large charity zoos, such as ourselves, remain

effectively excluded. The lobbying continues, in an attempt to persuade the Government to amend the scheme.

By late spring our public affairs focus began shifting to the end of lockdown and the reopening of the Zoo. Again, this involved regular dialogue with civil servants and direct lobbying of Ministers. However, when the unexpected and devastating decision was taken to force us to remain closed, with no plan in place for when we might be able to reopen, it was time to ramp up the public pressure in the form of the Save our Zoo campaign. Public affairs played a key role in this, working in tandem with the marketing, PR and fundraising departments.

Our two constituency MPs, Chris Matheson and Justin Madders, were unwavering in their support and took to the airwaves and the House of Commons chamber to argue our case. We also managed to significantly increase the breadth of our parliamentary support, especially with MPs in constituencies within our wider catchment area. In particular, we greatly valued the support offered by several Cheshire based MPs, led by Edward Timpson, Andy Cater and Kieran Mullan. We saw huge levels of support from parliamentarians on social media, in the form of tweets, videos and open letters to ministers. MPs told us that Save our Zoo was the number one issue for their constituents and one local MP told us their email inbox had crashed under the weight of concern.

We worked with supportive MPs to table parliamentary questions and Wallasey MP, Angela Eagle, to table an early day motion specifically highlighting Chester Zoo and the campaign. This received support from across the political spectrum. Working with colleagues at BIAZA, we secured a debate in Parliament, which proved to be a huge success. During a three hour debate, one attendee remarked that it was the best attended adjournment debate that they had witnessed in over 30 years.

As well as influencing on a national level, a major focus in 2020 was working with local stakeholders. We received invaluable support from our local ward councillors and the leadership of Cheshire West and Chester Council. The Council threw their weight behind our reopening plans, writing to the Prime Minister to highlight the inconsistencies in the Government's approach and declaring us safe to reopen. We also worked closely with key stakeholders such as the Cheshire and Warrington Local Economic Partnership and Marketing Cheshire.

# Thank You!

**In 2020, for the first time in our history, we had to ask for help. And something truly remarkable unfolded.**

Like so many other charities, the pandemic certainly pushed everyone at Chester Zoo to our emotional and professional limits. But having so much support behind us brought hope and renewed energy throughout the year. We have said it many times but it never stops being true – we are always astounded by the extent of the passion shown to our 90-year old zoo.

From the moment we launched Save Our Zoo, we saw a tsunami of love. Donations poured in, devoted members continued their support, MPs found themselves bombarded with emails about Chester Zoo, and exceptional people up and down the country set up wonderful and wacky fundraisers to generate vital donations for us.

From over 90 countries across the globe, our supporters raised over £3.3 million in donations over just a matter of months. We could never ever have expected that.

And during the commotion and noise of a very public emergency campaign, our trusted and loyal long-standing supporters continued to back critical conservation and

education programmes. We are immensely grateful to our corporate sponsors for renewing their support, even if facing tough times themselves, and to grant-giving bodies who, no doubt being overwhelmed by applications, funded ongoing fieldwork and scientific research.

As always, we were honoured to be considered by so many as a place to fulfil lifetime wishes through gifts in Wills, and to be guardians of special memories and that special place where the lives of those we have lost can be celebrated. In a year such as this, we cannot help but feel the poignancy more than ever.

It's the generosity of all these supporters, coming together in so many different ways, that provided a vital lifeline to enable us to meet our critical running costs whilst being unable to generate income from visitors. We are so thankful for that generosity; for people being there when we needed it most.

Chester Zoo has been saved by incredible acts of kindness, generosity and tenacity. Our words are genuinely heartfelt – our donors are absolutely extraordinary. Thank you.



# With huge thanks to all our supporters:

## Conservation Champions

Chester Race Course Company  
Co-operative Group  
Craghoppers  
Ferrero UK  
MECX Group  
Saputo Dairy UK  
Rhino Products Ltd

## Corporate Champions

Airbus  
Bank of America Merrill Lynch  
Darwin Escapes  
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## Corporate Supporters

3D Squared  
Barclays Bank  
Iceland  
M&S Bank  
Stagecoach  
Sykes Cottages Ltd  
Toyota Motor Manufacturing Ltd

## Retail Partners

Charlie Bears  
Joe Davies Ltd  
Steven Brown

## Trusts, Grants & Major Gifts

Alan & Karen Grieve Charitable Trust  
Bathgate Charitable Trust  
Joyce Lund Charitable Trust  
Lord Leverhulme's Charitable Trust  
Marjorie Coote Charitable Trust  
Marsh Christian Trust  
Oak Foundation  
The Philip Barker Charity  
Sir Donald & Lady Edna Wilson Charitable Trust  
William Dean Countryside and Educational Trust  
William Haddon Charitable Trust

## Incredible Individual Gifts

Barbara  
Mrs Sandra Birnie  
Peter & Lesley Brown  
Sheila Fern Brunstrom  
Bryant Ltd  
Andrew & Savitha Calthorpe  
Mr and Mrs Dewing  
Ann Fraser  
Liz Hall and Family  
Mrs Mary Valentine Harris  
Dee & Alex Jones  
Monica O'Connor  
Jenny Slee  
Professor Julian and Mrs Hazel Verbov  
Brenda Waters

## And recognised with love & respect...

All those making a considerable or ongoing impact through lifetime support and gifts in wills. We are proud to be a place where a passion for wildlife is inspired and shared; where precious memories are passed down through the generations.

## Definitely not forgetting...

The **137,000+** Save Our Zoo donors, over **1,300** Fundraising Superstars, the **38** innovative corporate participants and our **52** Sustainable Palm Oil City Champions. And, of course, all the amazing donors who wish to remain anonymous!

AIRBUS

BANK OF AMERICA

CHESTER RACE COMPANY LTD.

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darwin escapes

FERRERO

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Rhino PRODUCTS

Saputo Dairy UK



## Looking Ahead – 2021 and Beyond

**The Society’s overarching objective for the forthcoming years is to re-establish financial stability in order to kick-start its role in fulfilling all of the conservation work within its mission. Although much zoo-based work has continued during the pandemic, many of the overseas projects were set to a ticking over mode.**

Reopening of the site and welcoming visitors back through the gates in a safe and secure manner is a key driver of the operations team. Attempting to recover lost income through other channels as well as maximising visitor-based income in a sustainable way will occupy staff time.

The team will work with local, regional and national bodies to ensure that each visitor remains as safe as possible and use its marketing strength to deliver a series of campaign messages throughout the rest of the year to both its members, visitors and stakeholders.

As well as reopening, recovery also means the Society looking forward to launching its Conservation Masterplan as well as reengaging the physical Strategic Plan for the site’s development over the next decade. The impact of Covid-19 may alter some of the decisions that were taken in the last few years, however there is a determination to rekindle development of the zoo as soon as financially possible. This will include the development of Grasslands, repair and refurbishment of the stable block, development of high

impact new animal habitats and improvements to the site’s infrastructure to enable its long term success in a new world. Looking forward also includes understanding and embracing those aspects of engagement that became prevalent during the months of 2020. Driving forward a digital strategy, maintaining remote working where it is efficient and safer, interacting with stakeholders in different ways through virtual sessions are three examples.

The team however are also braced for an “Analogue Renaissance”. The end of lockdown and the subsidence of Covid-19 may encourage outdoor life. Families and friends will want to interact, meet and enjoy life; escape from the confines of their homes, and with a potential staycation period, the team are ready to welcome back visitors when possible.

Finally, and on a more sombre note, the Society recognises that any defeat of Covid-19 may not be the end of global viruses and that it should model its work both in the UK and across its worldwide footprint with that in mind, in a revised strategy due to be published in 2022.

# Structure, Governance & Management

## Structure

The North of England Zoological Society (“the Society”) is a registered charity (Number 306077) and a company limited by guarantee (Number 00287902), regulated by its Memorandum and Articles of Association. Its principal and registered office is Cedar House, Chester Zoo, Caughall Road, Upton, Chester, CH2 1LH.

The Society, which owns and operates Chester Zoo, also wholly owns a trading subsidiary company, Chester Zoo Enterprises Limited, registered in England with company number 02669535, whose taxable profits are distributed to the Society via Gift Aid.

Chester Zoo Foundation Nigeria (“CZFN”), an unlimited company (registered in England with company number 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 are now dormant having originally been established to facilitate 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 with company number 09173532) which provides governance of the Society’s defined benefit pension scheme.

## 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 Principal Executives and their teams who implement these policies. In March 2021, having considered the shape, strategy and management required for the zoo as it moves forwards, Trustees appointed Jamie Christon as Chief Executive Officer, replacing Dr Mark Pilgrim who stood down.

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 Chair and Vice Chairs 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.

## 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 2020, 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 insofar 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 independent 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** – prime responsibility is to determine the remuneration for the principal executives on behalf of the Trustees. Remuneration for other key managers are set by the principal executive in consultation with the remuneration committee. The society engages Korn Ferry to benchmark remuneration against the not for profit sector outside London and uses these benchmarks where possible in determining remuneration.

**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 2020 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	x
Jen Carter		x			
Edwin Christmas					
Penny Coates		x			x
Sandra Donnelly					
Prof Richard Griffiths	Chair				
Prof David MacDonald					
Lee Rawlinson					
Simon Venables		Chair			

## Trustee Recruitment

If there are vacancies in any year, the Trustee Nominations 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.

# Risk Management

## Risk Management

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:

- A major event outside the control or influence of management threatens staff and/or public safety or zoo operations. The Covid-19 pandemic is an example of such an event and the long term effect of the pandemic is likely to impact the way the zoo operates for the foreseeable future.
- A major incident within the control or influence of management threatens human or animal safety, or damages the Society's reputation or the zoo's ability to operate.
- There is a significant downturn in financial performance for a prolonged period.

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.

# Going Concern and Covid-19

The financial statements have been prepared on a going concern basis. In determining the appropriate basis of preparation of the financial statements, the Trustees are required to consider whether the Society and the group can continue in operational existence for the foreseeable future. Having been closed for almost 4 months in 2020, the zoo was closed again on 5th January 2021 due to the Covid-19 pandemic and re-opened on the 12th April, the closure having a material impact on the Society's income. Visitor capacity and income will remain reduced until such time as social distancing measures are removed. It is hoped this will be in June 2021, as set out in the government's roadmap.

As in 2020, discretionary spend has been curtailed. The Society has continued to utilise the government's Job Retention Scheme for those staff not needed to maintain operations during closure and whilst visitor numbers and income remain restricted. Capital expenditure plans have generally been suspended, with only critical maintenance projects taking place.

The Society has continued to utilise its banking facility provided by Santander, comprising a £22m Revolving Credit Facility and a £2m overdraft throughout the pandemic. The facility was intended to be used in the main to fund the Grasslands development, which has now been delayed and the facility has instead provided additional headroom during an uncertain period.

The facility is provided subject to two financial covenants which are tested quarterly: net debt to EBITDA (leverage) and EBITDA to net finance charges. In recognition of the current macroeconomic uncertainty, the Society's bank agreed to suspend testing of these covenants until June 2021, and agreed that had the zoo been unable to re-open on 12th April, the June 2021 covenant test would also have been suspended. We are grateful to Santander for their ongoing support during these uncertain times.

With the re-opening of the zoo on 12th April, the Society is expected to generate sufficient income to meet the covenant tests in the facility.

The Trustees consider that the Society and group are well placed to manage the risks within its control and mitigate those outside its control, including the impact of the Covid-19 pandemic. After the review of prudent forecasts and predictions for the period to 31st December 2022, which do not take account of any potential upside of the removal of social distancing measures in June 2021, whilst taking account of reasonably possible changes in income and considering the existing banking facilities and cash reserves, the Trustees expect that the Society and group will have adequate resources to continue in operational existence for the next 12 months following the date of approval of the financial statements.

However, there remains uncertainty as to the continued impact of the Covid-19 pandemic and further national or local lockdowns remain a possibility. The ability of the Society to withstand a further closure depends on its timing and duration – a short closure during the summer would result in greater lost income than a longer closure during the winter. In addition the potential of an economic downturn following the pandemic may impact visitor numbers and memberships. As a consequence of these uncertainties the Trustees have considered downside scenarios that reflect such potential closures.

The scenarios considered were:

- A months delay to the zoo's re-opening on 12th April
- A two week closure in August, the zoo's busiest period
- A 3 month closure over winter 2021/22 including cancellation of the winter Lanterns event

Set against these scenarios would be mitigating actions such as further reductions in discretionary expenditure, further utilisation of the Job Retention Scheme, deferral of capital expenditure plans and the potential for improved financial performance if social distancing restrictions are removed in summer 2021.

Whilst there is sufficient headroom in the Society's cash reserves and banking facility to manage all of these scenarios independently, there remains the potential for a covenant breach within the next 12 months. The bank remains supportive, as indicated by the agreed suspension of covenant tests, and further flexibility may be available in the future if required.

The impact of further closures indicates a material uncertainty outside the control of the Society which may cast significant doubt over the Society's ability to continue as a going concern in the event that, if the closure resulted in a covenant breach, the bank elected to trigger a repayment of outstanding debt. In such circumstances and without further mitigating actions, the Society may be unable to realise assets and discharge liabilities in the normal course of business. The Society's financial statements do not include the adjustments that would result if the Society and group were unable to continue as a going concern.

Having undertaken this work, and considered the uncertainties described above, the Trustees are of the opinion that the Society and group has adequate resources to continue in operational existence for the foreseeable future, being a period of not less than 12 months from the date of approval of these financial statements. Accordingly, they continue to adopt the going concern basis in preparing the financial statements.



# Public Benefit, Grant Making and Fundraising

## 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, food & beverage 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 40,000 receiving free admission, together with 136,000 visits by under 3s who visit for free. There were more than 32,000 concessionary priced education visits, a significant reduction from 2019 (132,000) due to the cancellation of many visits, but of those who did visit over 26,000 received free admission.

## 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 to whom we provide ongoing financial support. One-off annual grants including scholarships are also awarded. In 2020 the Society gave grants totalling £0.6m (2019: £1.0m) with the reduction reflecting the impact of the zoo's closures due to Covid-19.

Criteria for funding support for projects include feasibility; expected conservation outcomes; 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 and 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.

## Fundraising

The Society is committed to making fundraising a fair, responsible and joyous experience for our supporters and those who fundraise on our behalf. We are committed to building and maintaining trust. We want people to feel connected to our work and understand the incredible impact their donations make.

The Society is wholly committed to best fundraising practice and as such we're signed up with the Fundraising Regulator. Both the organisation, and the fundraisers operating within it, abide by the Code of Fundraising Practice. We do not undertake fundraising that we consider to be intrusive or not akin to the inclusive culture of our organisation, and have taken the decision to eliminate the following activities from our fundraising:

- Telephone fundraising (either in-house or third party)
- Mass unaddressed direct-mail postal fundraising campaigns
- Door-to-door fundraising campaigns
- Wealth screening of our databases
- Direct cold telephone asks to individuals where there is no personal link or connection
- Direct outbound SMS fundraising campaigns

In 2020 we employed three permanent members of staff within the fundraising team, based at Chester Zoo. In addition, we sought external support from three consultants, to work on trusts, foundations and grants, and major donor giving. Consultant fundraisers contracted to work on our behalf must either be a member of the Institute of Fundraising, or be contracted on terms which directly embrace the Fundraising Promise, the Code of Practice and our own fundraising ethics. Consultants are not remunerated by commission or commission-only methods.

Consultants working on our behalf are very much treated like part of the core team, with regular update meetings to assess style, tone and content of any proposals, applications or asks and monitoring targets of quality assurance and compliance.

The permanent fundraising team are subject to regular meetings to monitor activity, reporting to the Director of Marketing about all areas of giving. The fundraising team also regularly report to the board of trustees to ensure there is a clear understanding of the zoo's fundraising activities, and the trustees are aware of their responsibilities in relation to fundraising.

Individuals, community groups, corporate social committees and schools often want to fundraise to donate to Chester Zoo. We support those by providing free and accessible guides to responsible and safe fundraising, pointing them to guidance provided by the Fundraising Regulator through the Code of Fundraising Practice. In 2020, our fundraising guides were adapted to reflect the restrictions brought about by the pandemic, encouraging people to fundraise safely and from home, taking into account all Government guidelines. Where appropriate, we issue communities and individuals wishing to fundraise for us with a letter of authority, solicitation statement or commercial participation agreement.

The Fundraising T&C's section of the Chester Zoo website outlines our fundraising complaints process and the steps we take to resolve any issue brought to us. From here, we also help people to access the Fundraising Regulator for advice and guidance. In 2020 we did not receive any complaints relating to our fundraising activities and received no action requests from the Fundraising Preference Service.

Safeguarding, and treating donors fairly, is paramount to our work. We support people on their donation journey with us, in whatever capacity requested or needed, responding to the needs of the individual as per the Code of Fundraising Practice. With relevant permissions, we communicate with our supporters so any indicators of additional required care become apparent (such as bereavement or personal circumstances). We take measures to protect donors including delaying the acceptance of gifts, returning gifts (cooling off period), monitoring online giving for gifts made in error or malicious activity, and ensuring there is clear transparency as to where a gift will be used.

If we believe an individual lacks sound capacity to make a donation, it will not be taken. Returned donations will be logged on our dedicated database, so we can prepare if another donation is made or attempted, making a reasoned judgment and acting appropriately. Supporters under the age of 16 must have explicit guardian approval, and must be accompanied by their guardian during any telephone communications and during their fundraising. They will not receive any general fundraising communications from us.

We take all reasonable steps to ensure that supporters understand the context, implications and use of their donation and our campaigns are carefully managed to never place undue emotional pressure to donate.

# Trustee Responsibilities

## 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 elected to prepare 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 Charities Statement of Recommended Practice (FRS102);
- make judgements and accounting 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 group 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.

## 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.

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

## Independent Auditor

A resolution to formally reappoint Grant Thornton UK LLP as independent auditors will be proposed at the Annual General Meeting.

The Trustees Annual Report and Financial Statements were approved by the Trustees and signed on their behalf on the 27 April 2021 by:



Bruce Ursell  
Chair of Trustees

# Independent Auditor's Report

## Opinion

We have audited the financial statements of The North of England Zoological Society (the 'parent charitable company') and its subsidiaries (the 'group') for the year ended 31 December 2020, which comprise the Consolidated Statement of Financial Activities, the Consolidated and Society Balance Sheets, the Consolidated Cash Flow Statement and notes to the financial statements, including a summary of significant accounting policies. The financial reporting framework that has been applied in their preparation is applicable law and United Kingdom Accounting Standards, including Financial Reporting Standard 102; The Financial Reporting Standard applicable in the UK and Republic of Ireland (United Kingdom Generally Accepted Accounting Practice). In our opinion, the financial statements:

- give a true and fair view of the state of the group's and parent charitable company's affairs as at 31 December 2020 and of the group's incoming resources and application of resources including, its income and expenditure for the year then ended;
- have been properly prepared in accordance with United Kingdom Generally Accepted Accounting Practice; and
- have been prepared in accordance with the requirements of the Companies Act 2006.

## Basis for opinion

We have been appointed as auditor under the Companies Act 2006 and report in accordance with regulations made under that Act. We conducted our audit in accordance with International Standards on Auditing (UK) (ISAs (UK)) and applicable law. Our responsibilities under those standards are further described in the 'Auditor's responsibilities for the audit of the financial statements' section of our report. We are independent of the group and parent charitable company in accordance with the ethical requirements that are relevant to our audit of the financial statements in the UK, including the FRC's Ethical Standard, and we have fulfilled our other ethical responsibilities in accordance with these requirements. We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our opinion.

## Material uncertainty related to going concern

We draw attention to the principal accounting policies on page 57 in the financial statements, which indicates that a material uncertainty exists that may cast significant doubt on the Group's and parent charitable company's ability to continue as a going concern.

In May 2020, the Group and parent charitable company secured a new banking facility which is subject to two financial covenants which are tested quarterly. In recognition of the current macroeconomic uncertainty, the Group's and parent charitable company's bank has agreed to suspend testing of these covenants until June 2021.

In performing their assessment of going concern the Trustees have considered forecast cash flows for the next 12 months following the date of approval of the financial statements. There remains uncertainty as to the continued impact of the COVID-19 pandemic and further national or local lockdowns remain a possibility. As a consequence of this uncertainty the Trustees have considered downside scenarios that reflect such potential closures.

The Trustees have considered three scenarios being a months delay to the zoo's re-opening on 12th April, a two week closure in August, the zoo's busiest period and a 3 month closure over winter 2021/22 including cancellation of the winter Lanterns event. In such circumstances the Group and parent charitable company would need to secure agreement with its bankers to waive the testing of covenants or waive any breaches in covenants beyond June 2021.

As stated in the principal accounting policies, these events or conditions, along with the other matters as set forth in the going concern principal accounting policy on page 57, indicate that a material uncertainty exists that may cast significant doubt on the Groups' and parent charitable company's ability to continue as a going concern. Our opinion is not modified in respect of this matter.

In auditing the financial statements, we have concluded that the trustee's use of the going concern basis of accounting in the preparation of the financial statements is appropriate.

## Other information

The trustees are responsible for the other information. The other information comprises the information included in the Trustees' Report, set out on pages 3 to 50 other than the financial statements and our auditor's report thereon. Our opinion on the financial statements does not cover the other information and, except to the extent otherwise explicitly stated in our report, we do not express any form of assurance conclusion 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 such material inconsistencies or apparent material misstatements, we are required to determine whether there

is a material misstatement in 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 in this regard.

### Opinion on other matters prescribed by the Companies Act 2006

In our opinion, based on the work undertaken in the course of the audit:

- the information given in the Strategic Report and the Directors' report, prepared for the purposes of company law, included in the Trustees' Report for the financial year for which the financial statements are prepared is consistent with the financial statements.
- the Strategic Report and the Directors' Report included in the Trustees' Report have been prepared in accordance with applicable legal requirements.

### Matter on which we are required to report under the Companies Act 2006

In the light of the knowledge and understanding of the group and parent charitable company and its environment obtained in the course of the audit, we have not identified material misstatements in the Strategic Report or the Directors' Report included in the Trustees' Report.

### Matters on which we are required to report by exception

We have nothing to report in respect of the following matters where the Companies Act 2006 requires us to report to you if, in our opinion:

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

### Responsibilities of trustees for the financial statements

As explained more fully in the Statement of Trustees' Responsibilities set out on page 50, the trustees (who are

also the directors of the charitable company for the purposes of company law) are responsible for the preparation of the financial statements and for being satisfied that they give a true and fair view, and for such internal control as the trustees 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 and the 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 or parent charitable company or to cease operations, or have no realistic alternative but to do so.

### Auditor's 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 auditor's 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](http://www.frc.org.uk/auditorsresponsibilities). This description forms part of our auditor's report.

### Explanation as to what extent the audit was considered capable of detecting irregularities, including fraud

Irregularities, including fraud, are instances of non-compliance with laws and regulations. We design procedures in line with our responsibilities, outlined above, to detect material misstatements in respect of irregularities, including fraud. Owing to the inherent limitations of an audit, there is an unavoidable risk that material misstatements in the financial statements may not be detected, even though the audit is properly planned and performed in accordance with the ISAs (UK).

The extent to which our procedures are capable of detecting irregularities, including fraud is detailed below:

- We obtained an understanding of the legal and regulatory frameworks applicable to the group and parent charitable company, and the industry in which it operates and determined which may influence the financial statements. Given the nature of its operating activities, the group and

parent charitable company is subject to several laws and regulations where the consequences of non-compliance could have a material effect on amounts or disclosures in the financial statements.

We determined that the following laws and regulations are the most significant which are directly relevant to specific assertions in the financial statements:

- Those that relate to reporting frameworks being FRS102 and the Statement of Recommended Practice ("Charities SORP (FRS102)") and the Charities Act 2011 and the Companies Act 2006 and the relevant tax compliance regulations.
- Those that relate to the operational activities of the group and parent charitable company as a Zoo being the Zoo Licencing Act 1981, including subsequent amendments, Health and Safety requirements of the animals, visitors and employees, data protection and bribery and corruption practices.
- We assessed the susceptibility of the group's and parent charitable company's financial statements to material misstatements, including how fraud might occur. We performed the following audit procedures to address the risks related to irregularities and fraud:
  - evaluation of the processes and controls in place to address the risks related to irregularities and fraud;
  - challenge of the assumptions and judgements made by management in its significant accounting estimates;
  - review of performance targets and conditions to funding received and their propensity to influence efforts made by management to manage earnings;
  - review and testing of journal entries, in particular manual journal entries, relating to management estimates and journal entries impacting the reported result for the year;
  - consideration of the potential for fraud in revenue recognition through the manipulation of revenue from membership income, cut off in respect of visitor admissions and claims in respect of the Coronavirus Job Retention Scheme grant;
  - identifying related parties and through our data interrogation tools performed a review for any related party transactions during the year.
- We enquired of management, the compliance officer, the Audit and Risk Management Committee and the internal auditors whether there was any awareness of instances of non-compliance with laws and regulations or whether they had any knowledge of actual or suspected fraud. We corroborated the results of our enquiries to supporting documentation such as board minute reviews.

• In assessing the potential risks of material misstatement, we obtained an understanding of the group's and parent charitable company's operations, the applicable statutory provisions and business risks that may result in risk of material misstatement, and the group's and parent charitable company's control environment, including the adequacy of procedures for authorisation of transactions.

• The engagement team's experience with similar engagements, their understanding and knowledge of the group's and parent charitable company's industry and their understanding of the industry and regulatory requirements were considered in assessing the appropriateness of the collective competence and capabilities of the engagement team.

No matters relating to non-compliance with laws and regulations or relating to fraud were identified in relation to the above-mentioned laws and regulations that were identified by us as most significant.

### Use of our report

This report is made solely to the charitable company's members, as a body, in accordance with Chapter 3 of Part 16 of the Companies Act 2006. Our audit work has been undertaken so that we might state to the charitable company's members those matters we are required to state to them in an auditor's report and for no other purpose. To the fullest extent permitted by law, we do not accept or assume responsibility to anyone other than the charitable company and the charitable company's members as a body, for our audit work, for this report, or for the opinions we have formed.

*Grant Thornton UK LLP*

Deborah Watson BSc (Hons) FCA  
Senior Statutory Auditor  
for and on behalf of Grant Thornton UK LLP  
Statutory Auditor, Chartered Accountants  
Liverpool

28 April 2021

# Consolidated Statement of Financial Activities

(including a consolidated income and expenditure account) for the year ended 31 December 2020

	Notes	Unrestricted Funds £'000	Restricted Funds £'000	Total 2020 £'000	Total 2019 £'000
<b>Income from:</b>					
<b>Charitable activities</b>					
Animals and plant collection	2	20,687	-	<b>20,687</b>	30,624
<b>Donations, Grants and Legacies</b>					
Donations & Gift Aid on admissions	3	1,847	-	<b>1,847</b>	2,932
Animal adoptions	3	1,185	-	<b>1,185</b>	260
Save Our Zoo campaign	3	3,260	-	<b>3,260</b>	-
Other voluntary income	3	674	280	<b>954</b>	922
Job Retention Scheme grant	3	-	1,326	<b>1,326</b>	-
<b>Other trading activities</b>					
Subsidiary's trading turnover	4	6,369	-	<b>6,369</b>	12,695
Job Retention Scheme grant	4	-	453	<b>453</b>	-
<b>Investments</b>					
Investment income	5	14	-	<b>14</b>	26
<b>Exceptional income</b>					
Insurance claim income	9	-	-	-	7,690
<b>Total income</b>		<b>34,036</b>	<b>2,059</b>	<b>36,095</b>	55,149
<b>Expenditure on:</b>					
<b>Charitable activities</b>					
Animals and plant collection	6a	(22,909)	(1,071)	<b>(23,980)</b>	(25,617)
Conservation and Science and education	6a	(3,586)	(827)	<b>(4,413)</b>	(5,722)
<b>Raising funds</b>					
Costs of generating voluntary income	6a	(520)	-	<b>(520)</b>	(365)
Subsidiary's cost of goods sold and other costs	4	(6,640)	(453)	<b>(7,093)</b>	(11,780)
<b>Exceptional costs society</b>	9	-	-	-	(891)
<b>Total expenditure</b>		<b>(33,655)</b>	<b>(2,351)</b>	<b>(36,006)</b>	(44,375)
<b>Net income</b>		<b>381</b>	<b>(292)</b>	<b>89</b>	10,774
<b>Other gains and losses</b>					
Transfer from restricted funds	21	5,276	(5,276)	-	-
Transfer to restricted funds	21	(59)	59	-	-
<b>Net movement in funds</b>		<b>5,598</b>	<b>(5,509)</b>	<b>89</b>	10,774
<b>Reconciliation of funds</b>					
<b>Total funds brought forward</b>	21	<b>53,735</b>	<b>7,675</b>	<b>61,410</b>	50,636
<b>Total funds carried forward</b>		<b>59,333</b>	<b>2,166</b>	<b>61,499</b>	61,410

The North of England Zoological Society made an unconsolidated surplus of £502,000 all of which related to normal continuing operations (2019: £10,774,000 of which £3,975,000 related to normal continuing operations and £6,799,000 resulted from exceptional income and expenditure).

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

The notes on pages 61 to 74 form part of these financial statements.

# Consolidated & Society Balance Sheets

as at 31 December 2020

	Notes	Consolidated		Society	
		2020 £'000	2019 £'000	2020 £'000	2019 £'000
<b>Fixed Assets</b>					
Intangible assets	12	<b>1,010</b>	1,238	<b>1,010</b>	1,238
Tangible assets	13	<b>69,101</b>	68,337	<b>69,101</b>	68,337
Investment in subsidiary companies	14	-	-	-	-
		<b>70,111</b>	69,575	<b>70,111</b>	69,575
<b>Current assets</b>					
Stocks	15	<b>743</b>	760	<b>132</b>	94
Debtors	16	<b>955</b>	7,959	<b>1,751</b>	8,667
Cash at bank and in hand	17	<b>5,814</b>	4,840	<b>5,807</b>	4,523
		<b>7,512</b>	13,559	<b>7,690</b>	13,284
<b>Creditors: amounts falling due within one year</b>	18	<b>(7,424)</b>	(10,274)	<b>(7,189)</b>	(9,999)
<b>Net current assets</b>		<b>88</b>	3,285	<b>501</b>	3,285
<b>Total assets less current liabilities</b>		<b>70,199</b>	72,860	<b>70,612</b>	72,860
<b>Creditors: amounts falling due after more than one year</b>	19	<b>(8,700)</b>	(11,450)	<b>(8,700)</b>	(11,450)
<b>Net assets</b>		<b>61,499</b>	61,410	<b>61,912</b>	61,410
<b>Funds employed</b>					
Income funds – restricted	21	<b>2,166</b>	7,675	<b>2,166</b>	7,675
Income funds - unrestricted	21	<b>59,333</b>	53,735	<b>59,746</b>	53,735
<b>Total funds employed</b>		<b>61,499</b>	61,410	<b>61,912</b>	61,410

The financial statements were approved and authorised by the Trustees and signed on their behalf on the 27 April 2021 by:



Bruce Ursell, Chair of Trustees

Company number – 00287902 – The North of England Zoological Society

The notes on pages 61 to 74 form part of these financial statements.

# Consolidated Cash Flow Statement

for the year ended 31 December 2020

	Notes	2020 £'000	2019 £'000
<b>Cash flows from operating activities:</b>			
<b>Net movement in funds as per the Statement of Financial Activities</b>		<b>89</b>	10,774
<b>Adjustments for:</b>			
Interest paid		270	223
Interest received	5	(14)	(26)
Amortisation charge	12	149	5
Depreciation charge	13	6,435	6,127
Impairment charge	13	208	-
Exceptional income due from insurers	9	-	(7,690)
Decrease/(increase) in stocks	15	17	(28)
(Increase)/decrease in debtors	16	(97)	106
(Decrease)/increase in creditors due within one year	18	(2,649)	1,121
Contributions to pension scheme		-	-
<b>Net cash generated from operating activities</b>		<b>4,408</b>	10,612
<b>Cash flows from investing activities:</b>			
Interest received	5	14	26
Insurance proceeds received		7,101	5,750
Purchase of fixed assets	12,13	(7,328)	(19,914)
<b>Net cash used in investing activities</b>		<b>(213)</b>	(14,138)
<b>Cash flow from financing activities:</b>			
Cash (outflows)/ inflows from borrowing	19	(2,750)	4,400
Interest paid		(270)	(223)
<b>Net cash (used in)/generated from financing activities</b>		<b>(3,020)</b>	4,177
<b>Operating cash inflow in year</b>		<b>1,175</b>	651
<b>Increase in net cash at bank in the year</b>			
		<b>1,175</b>	651
Cash and cash equivalents at 1 January	17	4,182	3,531
Cash and cash equivalents at 31 December	17	5,357	4,182

The notes on pages 61 to 74 form part of these financial statements

# 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 ("Charities SORP (FRS102)") applicable to charities preparing their financial statements in accordance with the Financial Reporting Standard applicable in the UK and Republic of Ireland (FRS102). The functional currency of the charity is sterling (£).

The group'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 subsidiaries, its cash flows and liquidity position are shown in these financial statements.

Significant estimates and judgements made in preparing the financial statements are set out on page 60. The Trustees' report also notes the principal risks and uncertainties that impact on the group.

The Society has taken advantage of the exemption allowed from preparing a cash flow statement on the basis that it is a qualifying entity and the consolidated cash flow statement included in these financial statements includes the Society's cash flows.

## Going concern

The financial statements have been prepared on a going concern basis. In determining the appropriate basis of preparation of the financial statements, the Trustees are required to consider whether the Society and the group can continue in operational existence for the foreseeable future.

Having been closed for almost 4 months in 2020, the zoo was closed again on 5th January 2021 due to the Covid-19 pandemic and re-opened on the 12th April, the closure having a material impact on the Society's income. Since re-opening, visitor capacity and income will remain reduced until such time as social distancing measures are removed. It is hoped this will be in June 2021, as set out in the government's roadmap. As in 2020, discretionary spend has been curtailed. The

Society has continued to utilise the government's Job Retention scheme for those key staff not needed to maintain operations during closure and whilst visitor numbers and income remain restricted. Capital expenditure plans have generally been suspended, with only critical maintenance projects taking place.

The Society has continued to utilise its banking facility provided by Santander, comprising a £22m Revolving Credit Facility and a £2m overdraft throughout the pandemic. The facility was intended to be used in the main to fund the Grasslands development, which has now been delayed and the facility has instead provided additional headroom during an uncertain period, the RCF will expire in April 2025.

The facility is provided subject to two financial covenants which are tested quarterly: net debt to EBITDA (leverage) and EBITDA to net finance charges. In recognition of the current macroeconomic uncertainty, the Society's bank agreed to suspend testing of these covenants until June 2021, and agreed that should the zoo have been unable to re-open on 12th April, the June 2021 covenant test would also have been suspended. We are grateful to Santander for their ongoing support during these uncertain times.

With the re-opening of the zoo on 12th April, the Society is expected to generate sufficient income for the Society to meet the covenant tests in the facility.

The Trustees consider that the Society and group are well placed to manage the risks within its control and mitigate those outside its control, including the impact of the Covid-19 pandemic. After the review of prudent forecasts and predictions for the period to 31st December 2022, which do not take account of any potential upside of removal of social distancing measures in June 2021, whilst taking account of reasonably possible changes in income and considering the existing banking facilities and cash reserves, the Trustees expect that the Society and group will have adequate resources to continue in operational existence for the next 12 months following the date of approval of the financial statements.

However, there remains uncertainty as to the continued impact of the Covid-19 pandemic and further national or local lockdowns remain a possibility. The ability of the Society to withstand a second closure depends on its timing and duration – a short closure during the summer would result in greater lost income than a longer closure during the winter. In addition the potential of an economic downturn following the pandemic may impact visitor numbers and memberships. As a consequence of these uncertainties the Trustees have considered downside scenarios that reflect such potential closures.

The scenarios considered were:

- A months delay to the zoo's re-opening on 12th April
- A two week closure in August, the zoo's busiest period
- A 3 month closure over winter 2021/21 including cancellation of the winter Lanterns event

Set against these scenarios would be mitigating actions such as further reductions in discretionary expenditure, further utilisation of the Job Retention Scheme and deferral of capital expenditure plans and the potential for improved financial performance if social distancing restrictions are removed in summer 2021.

Whilst there is sufficient headroom in the Society's cash reserves and banking facility to manage all of these scenarios independently, there remains the potential for a covenant breach within the next 12 months. The bank remains supportive, as indicated by the agreed suspension of covenant tests, and further flexibility may be available in the future if required.

The impact of further closures indicates a material uncertainty outside the control of the Society and the group which may cast significant doubt over the Society's and the group's ability to continue as a going concern in the event that, if the closure resulted in a covenant breach, the bank elected to trigger a repayment of outstanding debt. In such circumstances and without further mitigating actions, the Society and the group may be unable to realise assets and discharge liabilities in the normal course of business. The Society's financial statements do not include the adjustments that would result if the Society and group were unable to continue as a going concern.

Having undertaken this work, and considered the uncertainties described above, the Trustees are of the opinion that the Society and group has adequate resources to continue in operational existence for the foreseeable future, being a period of not less than 12 months from the date of approval of these financial statements. 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 and the North of England Zoological Society Pension Trustee Company Limited made up to 31 December 2020 and comply with recommended practice for accounting by charities. The results of the subsidiaries are consolidated on a line by line basis. 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. Chester Zoo (Nigeria) Limited and Chester Zoo Foundation Nigeria have not been included because they are dormant and not considered material to the group.

## 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.

The unrestricted fund represents the funds to provide for the working capital of the group and contingent expenditure.

## Incoming Resources

In accordance with the SORP, all incoming resources becoming receivable by the group 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 from government and non-government sources 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 Charities SORP, support costs have been allocated to charitable activities and fundraising, apportioned by usage according to relative cost driving activities. Support costs also include governance costs as a separate component in line with the Charities SORP. Governance costs comprise of all costs involving public accountability of the group and its compliance with regulations and good practice.

## 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.

## Intangible Fixed Assets

Computer software is included in the balance sheet at historic purchase cost less accumulated amortisation. Assets in the course of construction are stated at cost, less any recognised impairment loss and are amortised when the assets are ready for their intended use.

Asset Class	Rate of Amortisation Applied
Computer software	10% to 25% straight line

## Tangible Fixed Assets

Tangible assets are included in the balance sheet at historic purchase cost less accumulated depreciation and any recognised impairment loss. 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. The estimated recoverable amount is reviewed at subsequent balance sheet dates where further information is available. Note 8 further explains the impairment charge recognised in the year ended 31st December 2020, no impairment charge was recognised in 2019.

## Leases

All leases currently held by the group are operating leases and the rental charges are taken as expenditure when incurred. The group 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 group operates two voluntary pension schemes.

The group 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 group is notified by the employee that they wish to opt out. The cost of these contributions is charged to the SOFA when payable.

The defined benefit scheme was closed to future accrual in March 2012. The group has historically made payments in order to reduce the scheme's solvency deficit over time. These payments have been 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 group does not recognise this in the financial statements as the group is unable to recover any surplus either through reduced contributions in the future or through refunds from the scheme.

## Grant-making

The group supports a wide range of conservation and research activities both in the zoo and externally, often in partnership with other organisations. Liabilities relating to grants are recognised once the group is irrevocably committed to the provision of the grant.

# Notes to the Consolidated Financial Statements

## 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.

## Debtors

Trade and other debtors are recognised at transaction price less any impairment.

## Cash at bank and in hand

Cash at bank and in hand includes cash, overdrafts and short term highly liquid investments with a short maturity of three months or less from the date of acquisitions, or opening of the deposit, or similar account.

## Creditors

Creditors are recognised where the group has a present obligation resulting from a past event that will probably result in the transfer of funds to a third party and the amount due to settle the obligation can be measured or estimated reliably. Creditors are normally recognised at their settlement amount after allowing for any trade discounts due.

## Financial instruments

The group only enters into basic financial instrument transactions that result in the recognition of financial assets and liabilities, like accounts receivable and payable.

Financial assets that are measured at cost and amortised cost are assessed at the end of each reporting period for objective evidence of impairment. If objective evidence of impairment is found, an impairment loss is recognised in the SoFA.

For financial assets measured at amortised cost, the impairment loss is measured as the difference between an asset's carrying amount and the present value of estimated cash flows discounted at the asset's original effective interest rate. If a financial asset has a variable interest rate, the discount rate for measuring any impairment loss is the current effective interest rate determined under the contract.

For financial assets measured at cost less impairment, the impairment loss is measured as the difference between an asset's carrying amount and best estimate, which is an approximation of the amount that the charitable company would receive for the asset if it were to be sold at the balance sheet date.

Financial assets and liabilities are offset and the net amount reported in the balance sheet when there is an enforceable right to set off the recognised amounts and there is an intention to settle on a net basis or to realise the asset and settle the liability simultaneously.

## Significant judgements and estimates

Preparation of the financial statements requires management to make significant judgements and estimates. The items in the financial statements where these judgements and estimates have been made include:

- Properties owned by the group that are rented out:**  
 The group owns a number of properties that are rented out. These properties are accounted for at cost less accumulated depreciation rather than as investment properties as the group does not hold these properties for investment purposes. They are held in furtherance of the charitable purposes of the group.
- Impairment of tangible fixed assets:**  
 Impairment tests will only be undertaken where there has been some indication that impairment has actually occurred. In a situation where the net book value of a tangible fixed asset will be greater than its recoverable amount, the value of the asset will be written down to this recoverable amount. At 31st December 2020 the Society had spent £1.1m on the Grasslands project which is included in Tangible Assets under construction. Construction work on this project was due to commence in autumn 2020, but due to the impact of Covid-19, the main construction is now expected to start in 2023, with enabling work taking place in 2022. The group therefore does not believe there is any impairment of the costs incurred to date on the Grasslands project.
- Depreciation rates:** depreciation rates used in respect of both tangible and intangible assets reflect the expected useful life of those assets based on historic experience. For major projects, component parts are allocated varying depreciation rates depending on their nature.
- Defined benefit pension scheme:** the present value of the pension scheme asset depends on a number of factors that are determined on an actuarial basis using a variety of assumptions. The assumptions used in determining the net cost (income) for pensions include the discount rate. Any changes in these assumptions, which are disclosed in note 25, will impact the carrying amount of the pension liability. The group has not recognised this pension scheme asset on the balance sheet as, despite the fact that as a result of the surplus the group is not currently making any contributions into the scheme, the scheme is closed to future accrual, and the group is not entitled to a refund from the scheme.

## 1. Status

The Society is a company limited by guarantee and has no share capital. Members have guaranteed the liabilities of the Society to the extent of £1 each in the event of the charity being wound up.

The registered address is Cedar House, Caughall Road, Chester, CH2 1LH. The principal activity of the Society is included in the Trustees report on page 3.

## 2. Income from Charitable Activities

	Unrestricted Funds			Total 2020	Total 2019
	Visitor Related £'000	Other unrestricted £'000	Other designated £'000	£'000	£'000
<b>Animals and plant collection</b>					
Visitor admission to zoo and gardens	10,604	-	-	<b>10,604</b>	19,786
Monorail	-	-	-	-	399
Membership of zoo and Gift Aid thereon	8,673	-	-	<b>8,673</b>	8,826
Events	1,074	-	-	<b>1,074</b>	1,248
Other	336	-	-	<b>336</b>	365
<b>Total incoming resources from charitable activities</b>	<b>20,687</b>	-	-	<b>20,687</b>	30,624

## 3. Income from Donations, Grants and Legacies

	Unrestricted 2020 £'000	Restricted 2020 £'000	Total 2020 £'000	Total 2019 £'000
Donations and Gift Aid on admission to zoo	1,847	-	<b>1,847</b>	2,932
Animal adoptions	1,185	-	<b>1,185</b>	260
Donations from Save Our Zoo campaign	3,260	-	<b>3,260</b>	-
Grants and other donations	674	280	<b>954</b>	922
Job Retention Scheme Grant	-	1,326	<b>1,326</b>	-
<b>Total voluntary income</b>	<b>6,966</b>	<b>1,606</b>	<b>8,572</b>	4,114

The restricted income funds derive from certain donations, grants and legacies received and are put towards a variety of capital projects, equipment or conservation activities. During the year the Society received a job retention scheme grant of £1,325,711 from the government in response to the effects of Covid-19 on the business. Chester Zoo Enterprises Limited also received a job retention scheme grant of £452,967 during the year. All of the conditions of the job retention scheme grants have been fulfilled.

#### 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.

However, due to the trading impact of Covid-19 during 2020, the subsidiary did not generate sufficient profits to make the gift aid distribution and as a result the Society agreed to waive the Gift Aid payment in 2020 and consequently paid corporation tax on its 2019 profit. A summary of the company's results for 2019 which have been restated to reflect the corporation tax payable is shown below.

The Society also provided a rent concession during the financial year which expired in December 2020 whereby the subsidiary would pay no rent during periods of closure, with rents during periods of operation being capped at the lower of 10% of turnover in an outlet or the rent in the lease agreement.

Audited financial statements for Chester Zoo Enterprises Limited for the year ended 31 December 2020 will be filed with the Registrar of Companies.

	Total 2020 £'000	Restated Total 2019 £'000
Chester Zoo Enterprises Limited trading results		
<b>Trading Income</b>	<b>6,369</b>	12,695
<b>Job Retention Scheme Grant</b>	<b>453</b>	-
<b>Total Income</b>	<b>6,822</b>	12,695
<b>Resources expended</b>		
Labour and cost of goods sold	(4,989)	(8,997)
<b>Gross trading surplus for year</b>	<b>1,833</b>	3,698
<b>Indirect costs</b>		
Operating and support costs paid to the Society	(2,008)	(2,783)
Property rents paid to Society	(325)	(732)
<b>Redundancy costs</b>	<b>(96)</b>	-
<b>Operating (loss)/profit</b>	<b>(596)</b>	183
Taxation	35	(35)
<b>(Loss)/profit for the financial year</b>	<b>(560)</b>	148
Donation waived/(payable) to parent under gift aid scheme	148	(148)
<b>(Deficit)/surplus retained in subsidiary</b>	<b>(412)</b>	-

#### 5. Investment income

	Total 2020 £'000	Total 2019 £'000
Interest on cash deposits	14	26
<b>Total investment income</b>	<b>14</b>	26

#### 6a. Analysis of Total Expenditure

	Employee Costs £'000	Redundancy Costs £'000	Other Direct Costs £'000	Support Costs (Note 6b) £'000	Total 2020 £'000	Total 2019 £'000
<b>Charitable activities</b>						
Animals and plant collection	7,174	385	10,008	6,413	<b>23,980</b>	25,617
Conservation science and education	1,940	106	1,049	1,318	<b>4,413</b>	5,722
<b>Total for Society</b>	<b>9,114</b>	<b>491</b>	<b>11,057</b>	<b>7,731</b>	<b>28,393</b>	31,339
<b>Raising funds</b>						
Costs of generating voluntary income	100	7	147	266	<b>520</b>	365
Exceptional costs (note 9)	-	-	-	-	-	891
Subsidiary's cost of goods sold and other costs	2,562	96	2,427	2,008	<b>7,093</b>	11,780
<b>Total for Society</b>	<b>9,214</b>	<b>498</b>	<b>11,204</b>	<b>7,997</b>	<b>28,913</b>	32,595
<b>Total expenditure for Group</b>	<b>11,776</b>	<b>594</b>	<b>13,631</b>	<b>10,005</b>	<b>36,006</b>	44,375

#### 6b. Analysis of Support Costs

	Total 2020 £'000	Total 2019 £'000
Direct Employee Costs	4,182	4,606
Other Costs	5,823	6,359
<b>Total of support costs</b>	<b>10,005</b>	10,965

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:

	Animals and plant collection £'000	Conservation science and education £'000	Generating voluntary income £'000	Subsidiary £'000	Total 2020 £'000	Total 2019 £'000
Support cost breakdown by activity						
Governance and Directorate	344	112	16	258	<b>730</b>	910
Human Resources	494	124	7	202	<b>827</b>	1,172
Information Technology	709	178	9	291	<b>1,187</b>	1,107
Finance Department	1,489	183	133	236	<b>2,041</b>	2,525
Security and Site operations	312	102	14	204	<b>632</b>	665
Maintenance Department	1,901	619	87	817	<b>3,424</b>	3,639
Estates and Project Planning	1,164	-	-	-	<b>1,164</b>	947
<b>Total</b>	<b>6,413</b>	<b>1,318</b>	<b>266</b>	<b>2,008</b>	<b>10,005</b>	10,965

## 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 2020 £'000	Total 2019 £'000
Conservation and Science and Education	586	23	609	1,043
<b>Total grants payable</b>	586	23	609	1,043

## 8. Net Income before other Recognised Gains and Losses

	Total 2020 £'000	Total 2019 £'000
This is after charging:		
Services provided by the Society's auditor		
Fees payable for the audit of the charity and consolidated accounts	35	32
Fees payable for the audit of the subsidiaries	8	11
Fees payable for taxation advice for the charity	3	-
Fees payable for taxation compliance for the subsidiary	5	3
Operating Leases	119	72
Amortisation of intangible fixed assets	149	5
Depreciation of tangible fixed assets	6,435	6,127
Impairment of tangible fixed assets (see below)	208	-

The impairment charge of £0.2m in the year represents costs incurred and capitalised in 2019 for decommissioning of the monorail as an enabler for the Grasslands development. As that project has now been delayed, with construction expected to start in 2023, the monorail decommissioning project has been considered independently and related costs written off.

## 9. Exceptional income and costs related to the Monsoon Forest fire

On 15th December 2018 a fire broke out in the Monsoon Forest building within the zoo's Islands zone. The fire caused significant damage to the buildings and its contents. The zoo was fully insured in respect of the damage and the building was finally restored and re-opened in October 2020.

Included within the financial statements for the year ended 31st December 2019, and shown as comparative figures to the year ended 31st December 2020 are the following amounts relating to the fire and the re-build:

Within the SOFA for 2019, exceptional income amounting to £7,690,000 was recognised based on the final insurance settlement agreed in 2020. This amount comprised:

	£'000
Further income to be received from insurers towards the cost of the re-instatement of the Monsoon Forest Building, in addition to the £5,160,000 recognised in 2018.	3,612
A contribution from insurers towards the cost of constructing buildings to house animals displaced by the fire	1,246
Income received from insurers to cover lost past and future income and additional costs of working	2,832
<b>Total</b>	<b>7,690</b>

Also included within the financial statements for 2019 were exceptional costs of £891,000. £731,000 of these costs were reimbursed by insurers and the income is included above. The balance of £160,000 related to costs that could not be recovered from insurers.

## 10. Trustees' Remuneration

The Trustees, being charity Trustees, received no remuneration (2019: nil) but received reimbursement totalling £447 (2019: £4,111) during the year for travel and accommodation expenses necessarily incurred. Indemnity insurance costing £16,074 (2019: £13,395) has been taken out by the Society to protect the Society, its Trustees and other employees.

## 11. Employee costs

The average monthly headcount employed by the Society during the year was 595 (2019: 830) including seasonal employees. The average monthly number of full-time equivalent employees (FTE) analysed by category were as follows:

	2020 Number	2019 Number
Animals and plant collection	227	263
Conservation science and education	57	57
Fundraising	3	3
Trading subsidiary	93	174
Support and Governance	122	121
<b>Total FTE employees</b>	<b>502</b>	<b>618</b>

The aggregate payroll costs of these persons were as follows:

	Total 2020 £'000	Total 2019 £'000
Wages and salaries cost	13,377	15,339
Social security cost	1,167	1,208
Pension cost:		
Defined benefit pension scheme	-	-
Defined contribution pension scheme	1,449	1,584
<b>Total employee costs</b>	<b>15,993</b>	<b>18,131</b>

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. Two are deferred members of the defined contribution pension scheme. Contributions to the defined contribution scheme for all of these employees totalled £103,864 (2019: £106,428).

	2020 Number	2019 Number
From £120,001 to £130,000	2	2
From £110,001 to £120,000	-	-
From £100,000 to £110,000	-	-
From £90,001 to £100,000	-	-
From £80,001 to £90,000	1	1
From £70,001 to £80,000	3	2
From £60,001 to £70,000	2	4

The key management personnel employed by the Society comprise five members of the executive team during the year. Their total employee benefits for 2020 including pension contributions, were £545,915 (2019: £535,115).

## 12. Intangible Assets

	Assets under course of construction £'000	Computer software £'000	Total £'000
<b>Cost</b>			
<b>At 1 January 2020</b>	<b>1,191</b>	<b>52</b>	<b>1,243</b>
Additions	22	82	104
Disposals and Transfers	(1,191)	1,008	(183)
<b>At 31 December 2020</b>	<b>22</b>	<b>1,142</b>	<b>1,164</b>
<b>Amortisation</b>			
At 1 January 2020	-	5	5
Charge for the year	-	149	149
<b>At 31 December 2020</b>	<b>-</b>	<b>154</b>	<b>154</b>
<b>Net book value</b>			
<b>At 31 December 2020</b>	<b>22</b>	<b>988</b>	<b>1,010</b>
At 31 December 2019	1,191	47	1,238

## 13. Tangible Assets

	Assets under construction £'000	Freehold Property £'000	Buildings and enclosures £'000	Machinery and equipment £'000	Animals and plant collection £'000	Total £'000
<b>Cost</b>						
At 1 January 2020	18,155	5,040	89,197	14,060	1	126,453
Additions	1,187	154	3,822	2,061	-	7,224
Transfers	(16,998)	-	16,998	183	-	183
Disposals	-	(43)	(11,565)	(1,404)	-	(13,012)
<b>At 31 December 2020</b>	<b>2,344</b>	<b>5,151</b>	<b>98,452</b>	<b>14,900</b>	<b>1</b>	<b>120,848</b>
<b>Depreciation</b>						
At 1 January 2020	-	2,844	47,514	7,758	-	58,116
Charge for the year	-	17	5,037	1,381	-	6,435
Impairment charge	-	-	208	-	-	208
Disposals	-	(43)	(11,565)	(1,404)	-	(13,012)
<b>At 31 December 2020</b>	<b>-</b>	<b>2,818</b>	<b>41,194</b>	<b>7,735</b>	<b>-</b>	<b>51,747</b>
<b>Net book value</b>						
<b>At 31 December 2020</b>	<b>2,344</b>	<b>2,333</b>	<b>57,258</b>	<b>7,165</b>	<b>1</b>	<b>69,101</b>
At 31 December 2019	18,155	2,196	41,683	6,302	1	68,337

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.

At 31st December 2020 the Society had spent £1.1m on the Grasslands project which is included in Tangible Assets under construction. Construction work on this project was due to commence in autumn 2020, but due to the impact of Covid-19, the main construction is now expected to start in 2023, with enabling work taking place in 2022.

## 14. Investments in subsidiary companies

	2020 £	2019 £
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 Limited	02669535	UK	Catering and Retail	100% ordinary	100% ordinary
Chester Zoo (Nigeria) Limited	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, Caughall Road, Upton-by-Chester, Chester, CH2 1LH. Activities in Nigeria have been wound down and Chester Zoo (Nigeria) Limited and Chester Zoo Foundation Nigeria are now dormant.

## 15. Stocks

	Group		Society	
	2020 £'000	2019 £'000	2020 £'000	2019 £'000
Goods for resale	611	666	-	-
Consumables	132	94	132	94
<b>Total</b>	<b>743</b>	<b>760</b>	<b>132</b>	<b>94</b>

## 16. Debtors: Amounts Falling Due Within One Year

	Group		Society	
	2020 £'000	2019 £'000	2020 £'000	2019 £'000
Trade debtors	170	199	163	189
Amount owed by subsidiary undertaking	-	-	838	718
VAT and Other debtors	8	59	8	59
Insurance debtor (note 9)	-	7,101	-	7,101
Corporation Tax repayable	35	-	-	-
Prepayments and accrued income	742	600	742	600
<b>Total</b>	<b>955</b>	<b>7,959</b>	<b>1,751</b>	<b>8,667</b>

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

## 17. Net debt

	At 1 January 2020 £'000	Cash flows £'000	At 31 December 2020 £'000
Cash deposits	3,128	915	4,043
Cash held in escrow	1,712	59	1,771
<b>Cash at bank and in hand</b>	<b>4,840</b>	<b>974</b>	<b>5,814</b>
Bank overdraft	(658)	201	(457)
<b>Cash and cash equivalents</b>	<b>4,182</b>	<b>1,175</b>	<b>5,357</b>
Revolving credit facility	(11,450)	2,750	(8,700)
<b>Net debt</b>	<b>(7,268)</b>	<b>3,925</b>	<b>(3,343)</b>

Cash at bank and in hand includes £1.8m (2019: £1.7m) of cash held in escrow, set aside for the Trustee of the Society's defined benefit pension scheme which is to be used, if required, to fund a buyout of the scheme, when the scheme liabilities would be fully secured with an insurer. The money would also be paid to the pension scheme if the Society were to become insolvent.

## 18. Creditors: Amounts Falling Due Within One Year

	Group		Society	
	2020 £'000	2019 £'000	2020 £'000	2019 £'000
Bank overdraft	457	658	457	658
Trade creditors	867	2,219	632	1,945
Other taxes and social security costs	478	403	478	403
Accruals	2,557	3,809	2,557	3,809
Other creditors	495	356	495	355
Deferred income	2,570	2,829	2,570	2,829
<b>Total</b>	<b>7,424</b>	<b>10,274</b>	<b>7,189</b>	<b>9,999</b>

The Society has a £2.0m bank overdraft facility which is renewed annually. The purpose of the overdraft is for short term working capital purposes. Interest on the overdraft is charged at 2.75% above LIBOR

	Balance at 31 Dec 2019 £'000	Utilised advanced purchases £'000	Advanced purchases £'000	Balance at 31 Dec 2020 £'000
<b>Deferred income</b>				
Memberships	2,639	(2,639)	2,211	2,211
Gift vouchers	148	(148)	290	290
Event deposits	42	(15)	42	69
<b>Total deferred income</b>	<b>2,829</b>	<b>(2,802)</b>	<b>2,543</b>	<b>2,570</b>

	Balance at 31 Dec 2018 £'000	Utilised advanced purchases £'000	Advanced purchases £'000	Balance at 31 Dec 2019 £'000
<b>Deferred income</b>				
Memberships	1,907	(1,907)	2,639	2,639
Gift vouchers	72	(72)	148	148
Event deposits	-	-	42	42
<b>Total deferred income</b>	<b>1,979</b>	<b>(1,979)</b>	<b>2,829</b>	<b>2,829</b>

## 19. Creditors: Amounts Falling Due After More Than One Year

	Group		Society	
	2020 £'000	2019 £'000	2020 £'000	2019 £'000
Revolving credit facility	8,700	11,450	8,700	11,450
<b>Total</b>	<b>8,700</b>	<b>11,450</b>	<b>8,700</b>	<b>11,450</b>

An unsecured £22m revolving credit facility was taken out with Santander in April 2020. The facility bears interest at a margin of between 1.5% and 1.75% above LIBOR on utilised amounts and a fee of 35% of the margin is paid on unutilised amounts. As part of compliance with the terms of the facility, the Society is obliged to meet two covenants. These are:

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

The facility expires in April 2025 when it must be repaid in full.

## 20. Financial instruments

The carrying amount of the group's and society's financial instruments at the year end were:

	Group		Society	
	2020 £'000	2019 £'000	2020 £'000	2019 £'000
<b>Financial assets:</b> debt instruments measured at amortised cost	<b>5,992</b>	12,445	<b>6,816</b>	12,836
<b>Financial liabilities:</b> financial liabilities measured at amortised cost	<b>13,076</b>	14,492	<b>12,841</b>	18,217

Financial assets that are debt instruments measured at amortised cost comprise cash and other assets that have the contractual rights to receive cash.

Financial liabilities measured at amortised cost comprise liabilities which have a contractual obligation to deliver cash.

## 21. Movement in Consolidated Funds

	Balance at 31 Dec 2019 £'000	New funds £'000	Funds utilised £'000	Transfers £'000	Balance at 31 Dec 2020 £'000
<b>Restricted funds</b>					
Animal and plant collections	58	26	(10)	(44)	30
Conservation science and education projects	371	254	(410)	44	259
Monsoon Forest fire donations	258	-	(152)	-	106
Escrow account - defined benefit pension scheme (note 17)	1,712	-	-	59	1,771
Job retention scheme grant	-	1,779	(1,779)	-	-
Insurance income	5,276	-	-	(5,276)	-
<b>Total restricted funds</b>	<b>7,675</b>	<b>2,059</b>	<b>(2,351)</b>	<b>(5,217)</b>	<b>2,166</b>
<b>Unrestricted funds</b>					
<b>Designated funds</b>					
Defined benefit pension scheme	1,194	-	-	(64)	1,130
Funds tied to fixed assets	50,641	-	-	3,752	54,393
<b>Total designated funds</b>	<b>51,835</b>	-	-	<b>3,688</b>	<b>55,523</b>
<b>Free reserves</b>					
Cash reserve	1,900	35,815	(35,434)	1,529	3,810
<b>Total free reserves</b>	<b>1,900</b>	<b>35,815</b>	<b>(35,434)</b>	<b>1,529</b>	<b>3,810</b>
<b>Total group funds employed</b>	<b>61,410</b>	<b>37,874</b>	<b>(37,785)</b>	-	<b>61,499</b>

	Balance at 31 Dec 2018 £'000 Restated	New funds £'000	Funds utilised £'000	Transfers £'000	Balance at 31 Dec 2019 £'000 Restated
<b>Restricted funds</b>					
Animal and plant collections	20	79	(41)	-	58
Conservation science and education projects	596	394	(619)	-	371
Monsoon Forest fire donations	163	95	-	-	258
Escrow account - defined benefit pension scheme (note 17)	998	-	-	714	1,712
Insurance income (note 9)	5,160	5,191	-	(5,075)	5,276
<b>Total restricted funds</b>	<b>6,937</b>	<b>5,759</b>	<b>(660)</b>	<b>(4,361)</b>	<b>7,675</b>
<b>Unrestricted funds</b>					
<b>Designated funds</b>					
Defined benefit pension scheme	3,602	-	-	(2,408)	1,194
Funds tied to fixed assets	38,597	-	-	12,044	50,641
<b>Total designated funds</b>	<b>42,199</b>	-	-	<b>9,636</b>	<b>51,835</b>
<b>Free reserves</b>					
Cash reserve	1,500	49,390	(43,715)	(5,275)	1,900
<b>Total free reserves</b>	<b>1,500</b>	<b>49,390</b>	<b>(43,715)</b>	<b>(5,275)</b>	<b>1,900</b>
<b>Total group funds employed</b>	<b>50,636</b>	<b>55,149</b>	<b>(44,375)</b>	-	<b>61,410</b>

	Unrestricted			2020 Total Funds £'000
	Free £'000	Designated £'000	Restricted £'000	
Fixed assets	-	70,111	-	70,111
Current assets	3,810	1,536	2,166	7,512
Creditors: amounts falling due within one year	-	(7,424)	-	(7,424)
Creditors: amounts falling due after more than one year	-	(8,700)	-	(8,700)
<b>Net assets</b>	<b>3,810</b>	<b>55,523</b>	<b>2,166</b>	<b>61,499</b>

	Unrestricted			2019 Total Funds £'000
	Free £'000	Designated £'000	Restricted £'000	
Fixed assets	-	69,575	-	69,575
Current assets	1,900	3,984	7,675	13,559
Creditors: amounts falling due within one year	-	(10,274)	-	(10,274)
Creditors: amounts falling due after more than one year	-	(11,450)	-	(11,450)
<b>Net assets</b>	<b>1,900</b>	<b>51,835</b>	<b>7,675</b>	<b>61,410</b>

Restricted income funds include income from certain donations, grants and legacies received, money set aside in escrow for the defined benefit pension scheme (note 25) and money due from insurers in respect of the Monsoon Forest rebuild project (note 9).

Designated funds relate the Society's strategy to fund its defined benefit pension scheme to buy-out with an insurance company in the medium term and to its fixed assets.

The Society sets aside a minimum £3.8m (2019: £1.9m) cash reserve, held separately from the Society's other cash balances. Such a sum is sufficient to operate for a period of two months without significant curtailment of its activities.

## 22. Capital Commitments

	Group		Society	
	2020 £'000	2019 £'000	2020 £'000	2019 £'000
Capital expenditure, contracted for but not provided in the financial statements	-	3,556	-	3,556

## 23. Leasing Commitments

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

	Group		Society	
	2020 £'000	2019 £'000	2020 £'000	2019 £'000
Within one year	-	4	-	4
Between one and five years	-	-	-	-
	-	4	-	4

## 24. Related Party Transactions

The Society did not receive a charitable donation by Gift Aid from Chester Zoo Enterprises Limited (2019: £nil). The Society leases retail and catering outlets to Chester Zoo Enterprises Limited for an agreed annual lease of £325,000 (2019: £732,000) with a concession to reflect the impact of Covid-19 on the operations on its subsidiary. It also charged staff and support costs totalling £2,007,635 (2019: £2,782,743). As at the 31 December 2020, the Society was owed £837,978 (2019: £717,584) from Chester Zoo Enterprises Limited.

## 25. 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 2017 and updated to 31 December 2020 for the purpose of these disclosures by Spence & Partners Limited, qualified independent actuaries.

	2020	2019
	£'000	£'000
Present value of funded defined benefit obligations	17,650	16,365
Fair value of plan assets	21,405	19,646
Surplus	3,755	3,281
Effect of asset ceiling	(3,755)	(3,281)
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:	2020	2019
Discount rate	1.34%	2.10%
Rate of price Inflation (RPI)	3.13%	3.21%
Rate of pension increases (5% RPI)	3.00%	3.07%
Rate of pension increases (2.5% RPI)	2.07%	2.09%

### Assumed life expectations on retirement at age 65:

Male member retiring today (member age 65)	22.4	23.1
Male member retiring in 20 years (member age 45 today)	24.0	25.3
Female member retiring today (member age 65)	24.8	25.7
Female member retiring in 20 years (member age 45 today)	26.5	28.0

The fair value of the plan assets were as follows:

	Fair value at 31 Dec 2020	2020 %	Fair value at 31 Dec 2019	2019 %
	£'000		(£'000)	
Cash and cash equivalents	214	1.0	1,177	6.0
Equities	2,098	9.8	3,656	18.6
Debt Instruments	19,093	89.2	14,813	75.4
Property	-	-	-	-
<b>Total</b>	<b>21,405</b>	<b>100.0</b>	<b>19,646</b>	<b>100.0</b>

	2020	2019
	£'000	£'000
<b>Change in defined benefit obligation</b>		
Benefit obligation at beginning of year	16,365	18,025
Interest cost	340	457
Past service cost	379	-
Remeasurement: Actuarial (gain)/loss	961	1,696
Benefits and expenses paid	(395)	(5,272)
Losses on settlements/curtailments	-	1,459
<b>Benefit obligation at end of year</b>	<b>17,650</b>	<b>16,365</b>

	2020	2019
	£'000	£'000
<b>Change in scheme assets</b>		
Fair value of scheme assets at beginning of year	19,646	22,655
Interest income	408	595
Employer contributions (incl. employer direct benefit payments)	-	-
Benefits and expenses paid	(395)	(5,272)
Remeasurements – return on scheme assets less interest income	1,971	1,668
Arrears allowance in respect of benefit rectification	(225)	-
<b>Fair value of scheme assets at end of year</b>	<b>21,405</b>	<b>19,646</b>

	2020 £'000	2019 £'000
<b>Expense recognised in the statement of financial activities</b>		
Current service cost	-	-
Net interest on net defined benefit obligation	(68)	(138)
Past service cost	604	-
Gains and losses on settlements and curtailments	-	1,459
Gains and losses due to surplus limitation	(536)	(1,321)
<b>Total net interest cost</b>		
Remeasurements:		
Effect of changes in assumptions	1,301	2,114
Effect of experience adjustments	(340)	(418)
Return on plan assets (excluding interest income)	(1,971)	(1,668)
Remeasurement on effect of asset ceiling	1,010	(28)
Pension deficit reduction accrual	-	-
<b>Total remeasurements included in other gains and losses in the SOFA</b>		
<b>Total pension cost recognised in the SOFA</b>		
	-	-

The Society has committed to making annual contributions with a view to funding the scheme on a solvency basis in the medium term. However, given the level of funding in the scheme it was agreed that the amounts due to be paid by the Society in 2018, 2019 and 2020 would instead be held in escrow by the Society and hence the amount has not been included in the assets above. In light of the Covid-19 pandemic, the society in agreement with the Trustees has deferred payment of the 2020 contribution to June 2021. The escrow balance of £1.8m forms part of the Society's cash and cash equivalents balance (note 17) and is treated as restricted funds (note 21).

The Trustees of the Scheme have a first legal charge over certain assets of the Society with a market value of circa £10m.

#### Contributions, Defined Contribution Scheme

Contributions to the defined contribution scheme totalled £1,449,165 (2019: £1,584,965). The expenditure is taken from unrestricted funds.

## 26. Post balance sheet events

On 5th January 2021, the zoo was closed to the public for the third time as a result of the Covid-19 pandemic. The zoo was able to re-open to the public on 12th April 2021. The closure for over 3 months has had a significant impact on the Society's income for 2021.

Front cover: Strawberry Frog

[www.chesterzoo.org](http://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

# MAMMALS STOCKLIST - 2020

Preferred Scientific Name	Common Name	Stock 31/12/19			Acquisitions			Births			Deaths			Dispositions			Stock 31/12/20		
		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	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0
<i>Thylogale brunii</i>	Dusky pademelon	6	5	1	0	0	0	0	0	1	0	0	0	4	4	1	2	1	1
<i>Setifer setosus</i>	Greater Madagascar hedgehog tenrec	5	2	0	0	0	0	0	0	0	0	0	1	2	0	4	0	0	
<i>Macroscelides proboscideus</i>	Short-eared elephant shrew	5	3	0	0	0	0	0	0	4	1	0	0	1	0	1	1	0	
<i>Orycteropus afer</i>	Aardvark	1	1	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	
<i>Procavia capensis</i>	Rock hyrax	2	6	0	0	0	0	1	1	1	1	0	1	0	3	0	2	4	0
<i>Elephas maximus</i>	Asian elephant	2	4	0	0	0	0	0	1	0	0	1	0	0	0	2	4	0	
<i>Choloepus didactylus</i>	Linne's two-toed sloth	1	1	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	
<i>Myrmecophaga tridactyla</i>	Giant anteater	1	1	0	0	0	0	0	1	0	0	1	0	0	0	1	1	0	
<i>Tamandua tetradactyla</i>	Southern tamandua	1	1	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	
<i>Tupaia belangeri</i>	Northern tree shrew	3	1	0	0	0	0	0	0	1	1	0	0	0	0	2	0	0	
<i>Eulemur coronatus</i>	Crowned lemur	2	2	0	0	0	0	0	0	1	1	0	0	0	0	1	1	0	
<i>Eulemur macaco</i>	Black lemur	2	1	0	0	0	0	0	1	0	0	0	0	0	0	2	1	1	
<i>Eulemur rubriventer</i>	Red-bellied lemur	1	1	0	0	0	0	0	0	1	0	0	1	0	0	1	1	0	
<i>Haplemur alaotrensis</i>	Alaotran gentle lemur	1	1	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	
<i>Lemur catta</i>	Ring-tailed lemur	18	9	0	0	0	0	4	2	0	0	1	0	0	0	22	10	0	
<i>Varecia rubra</i>	Red ruffed lemur	5	0	0	0	0	0	0	0	0	0	0	0	0	0	5	0	0	
<i>Varecia variegata subcincta</i>	White-bellied ruffed lemur	1	1	0	0	0	0	3	0	0	0	0	0	0	0	4	1	0	
<i>Daubentonia madagascariensis</i>	Aye-aye	1	2	0	0	0	0	0	0	0	0	0	0	0	0	1	2	0	
<i>Cebuella pygmaea niveiventris</i>	Eastern pygmy marmoset	1	1	0	0	0	0	0	0	4	0	0	0	0	0	1	1	4	
<i>Leontopithecus chrysomelas</i>	Golden-headed lion tamarin	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0	
<i>Saguinus bicolor</i>	Pied tamarin	8	6	0	0	0	0	0	2	0	0	0	2	0	0	6	8	0	
<i>Saguinus imperator subgriseescens</i>	Emperor tamarin	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	
<i>Sapajus xanthosternus</i>	Buffy-headed capuchin	3	1	1	0	0	0	0	0	1	0	0	0	0	0	2	1	1	
<i>Alouatta caraya</i>	Black howler	1	1	0	0	0	0	0	0	0	1	0	0	0	0	1	0	0	
<i>Ates fusciceps rufiventris</i>	Black-headed spider monkey	4	6	0	0	0	0	0	0	1	1	0	1	0	0	3	6	0	
<i>Macaca nigra</i>	Sulawesi crested macaque	6	14	0	0	0	0	0	0	0	0	0	0	4	0	6	10	0	
<i>Macaca silenus</i>	Lion-tailed macaque	3	9	0	0	0	0	0	0	0	0	0	0	0	0	3	9	0	
<i>Mandrillus sphinx</i>	Mandrill	1	10	0	0	0	0	0	0	0	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	1	1	0	
<i>Hylobates moloch</i>	Javan gibbon	2	2	0	0	0	0	1	0	0	1	0	0	0	0	2	2	0	
<i>Pan troglodytes</i>	Chimpanzee	7	14	0	0	0	0	0	1	0	1	0	0	0	0	6	15	0	
<i>Pongo pygmaeus</i>	Bornean orangutan	3	3	0	0	0	0	0	1	0	0	0	0	0	0	3	4	0	
<i>Pongo abelii</i>	Sumatran orangutan	2	5	0	0	0	0	0	0	1	0	0	1	0	0	2	5	0	
<i>Callosciurus prevostii rafflesii</i>	Prevost's squirrel	3	8	0	0	0	0	3	3	9	1	2	9	1	2	4	7	0	
<i>Tamias swinhoei</i> *	Swinhoe's striped squirrel	6	9	0	0	0	0	7	4	3	5	9	3	0	0	8	4	0	
<i>Brachytarsomys albicauda</i>	White-tailed antsangy	6	4	2	0	0	0	0	0	9	0	0	11	6	4	0	0	0	
<i>Hypogeomys antimena</i>	Votsovo's/Giant jumping rat	2	4	0	0	0	0	0	0	0	0	0	0	0	0	2	4	0	
<i>Acomys cilicicus</i> *	Turkish spiny mouse	76	83	2	0	0	0	0	0	217	61	16	162	20	55	0	37	52	5
<i>Mus minutoides</i> *	Pygmy mouse	95	70	27	0	0	0	0	0	58	112	85	123	35	20	0	65	100	29
<i>Phloeomys pallidus</i>	Slender-tailed cloud rat	1	3	1	0	0	0	1	1	2	0	0	3	0	0	2	4	0	
<i>Thalomys paedulcus</i> *	Acacia rat	4	6	4	0	0	0	1	1	16	0	3	12	1	2	3	5	4	2
<i>Heterocephalus glaber</i> *	Naked mole-rat	15	41	17	0	0	0	0	0	95	0	2	62	0	0	20	4	8	62
<i>Hystrix africaeaustralis</i>	Cape porcupine	1	1	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0
<i>Hydrochoerus hydrochaeris</i>	Capybara	0	3	0	1	0	0	0	0	0	0	0	0	0	0	1	3	0	
<i>Dasyprocta azarae</i>	Azara's agouti	5	4	0	0	0	0	0	2	4	0	0	4	4	2	0	1	4	0
<i>Pteropus rodricensis</i>	Rodrigues Fruit Bat	72	150	0	0	0	0	9	5	3	12	11	2	0	20	0	69	124	1
<i>Carollia perspicillata</i> *	Seba's short-tailed bat	93	287	6	0	0	0	76	31	228	280	74	249	12	12	1	0	0	298
<i>Acinonyx jubatus soemmeringii</i>	Central African cheetah	2	1	0	0	0	0	0	0	0	0	0	0	0	0	2	1	0	
<i>Felis silvestris grampia</i>	Scottish wild cat	1	2	0	0	0	0	0	0	0	0	0	0	0	0	1	2	0	
<i>Panthera leo persica</i>	Asiatic lion	1	2	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	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	2	0	0
<i>Arctictis binturong whitei</i>	Palawan binturong	1	1	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	
<i>Cryptoprocta ferox</i>	Fossa	1	1	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	
<i>Galidictis grandidieri</i>	Granddier's Vontsira	3	1	0	0	0	0	0	0	0	0	0	0	0	0	3	1	0	
<i>Mungotictis decemlineata</i>	Narrow-striped mongoose	1	2	0	0	0	0	0	0	1	0	1	0	0	0	1	1	1	
<i>Helogale parvula</i>	Dwarf mongoose	5	3	0	0	0	0	4	2	2	0	1	2	3	0	6	4	0	
<i>Herpestes javanicus</i>	Javan mongoose	2	2	0	0	0	0	0	0	0	0	0	0	0	0	2	2	0	
<i>Suricata suricatta</i>	Slender-tailed meerkat	5	2	4	0	0	0	2	5	3	2	1	2	1	0	4	6	5	
<i>Lycaon pictus</i>	African hunting dog	4	4	0	0	0	0	0	0	7	0	0	5	0	0	4	4	2	

<i>Speothos venaticus</i>	Bush dog	6	8	0	0	0	0	0	0	3	0	0	3	4	0	0	2	8	0
<i>Helarctos malayanus</i>	Malayan sun bear	1	2	0	0	0	0	0	0	0	0	0	0	0	0	0	1	2	0
<i>Tremarctos ornatus</i>	Andean bear	1	1	0	0	0	0	1	1	0	0	0	0	0	0	0	2	2	0
<i>Aonyx cinerea</i>	Oriental small-clawed otter	7	8	0	0	0	0	0	0	0	2	0	0	2	3	0	3	5	0
<i>Pteronura brasiliensis</i>	Giant otter	1	2	0	0	0	0	0	0	6	0	0	6	0	2	0	1	0	0
<i>Ailurus fulgens fulgens</i>	Red panda	2	2	0	0	0	0	1	0	0	0	0	0	1	0	0	2	2	0
<i>Equus grevyi</i>	Grevy's zebra	0	4	0	1	0	0	0	0	0	0	0	0	0	0	0	1	4	0
<i>Equus hemionus onager</i>	Persian onager	0	7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	7	0
<i>Tapirus indicus</i>	Malayan tapir	2	1	0	0	0	0	0	0	0	0	0	0	1	0	0	1	1	0
<i>Tapirus terrestris</i>	South American tapir	2	1	0	0	0	0	1	0	0	0	0	0	0	0	0	3	1	0
<i>Diceros bicornis michaeli</i>	Eastern Black rhinoceros	4	5	0	0	0	0	0	1	0	0	0	0	1	1	0	3	5	0
<i>Rhinoceros unicornis</i>	One-horned rhinoceros	2	1	0	0	0	0	0	0	0	0	0	0	1	0	0	1	1	0
<i>Babryrousa sp.</i>	Babirusa	4	10	0	0	0	0	2	0	3	1	2	0	1	2	0	4	6	3
<i>Phacochoerus africanus</i>	Warthog	2	3	0	0	0	0	0	0	0	0	0	0	1	0	0	1	3	0
<i>Potamochoerus porcus</i>	Red River hog	1	5	0	0	0	0	0	0	0	0	0	0	0	0	0	1	5	0
<i>Sus cebifrons</i>	Visayan warty pig	3	3	0	0	0	0	0	1	1	0	0	1	0	0	0	3	4	0
<i>Camelus bactrianus</i>	Bactrian camel	0	3	0	0	0	0	0	0	1	0	0	1	0	0	0	0	3	0
<i>Tragulius nigricans</i>	Philippine mouse-deer	0	3	0	0	0	0	0	0	0	0	1	0	0	0	0	0	2	0
<i>Pudu puda</i>	Southern pudu	3	2	0	0	0	0	1	0	0	2	0	0	1	0	0	1	2	0
<i>Rucervus eldii thamin</i>	Burmese brow-antlered deer	0	8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	8	0
<i>Rusa alfredi</i>	Philippine Spotted Deer	1	1	0	0	0	0	1	0	1	0	0	1	0	0	0	2	1	0
<i>Giraffa camelopardalis rothschildi</i>	Baringo giraffe	4	6	0	0	0	0	0	0	0	0	0	0	2	0	0	2	6	0
<i>Okapia johnstoni</i>	Okapi	2	2	0	0	0	0	0	1	0	0	0	0	1	0	0	1	3	0
<i>Damaliscus pygargus phillipsi</i>	Blesbok	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1	0
<i>Madoqua kirkii</i>	Kirk's dik-dik	2	1	0	0	0	0	1	1	0	1	0	0	0	1	0	2	1	0
<i>Bos javanicus</i>	Javan banteng	4	11	0	0	0	0	2	4	0	5	2	0	0	0	0	1	13	0
<i>Bubalus depressicornis</i>	Lowland Anoa	2	1	0	1	0	0	0	0	1	0	0	1	0	0	0	3	1	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	1	3	0	0	0	0	0	0	0	0	1	0	0	0	0	1	2	0
<i>Tragelaphus spekii gratus</i>	West African Sitatunga	1	13	0	0	0	0	0	0	0	0	1	0	0	0	0	1	12	0
<i>Cephalophus natalensis</i>	Red forest duiker	1	2	0	0	0	0	0	0	0	0	0	0	0	0	0	1	2	0
<i>Hippotragus equinus</i>	Roan antelope	0	7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	7	0
		568	948	65	3	1	0	122	71	684	495	219	667	107	140	25	363	575	415
			<b>1581</b>			<b>4</b>			<b>877</b>			<b>1381</b>		<b>272</b>			<b>1353</b>		

\* denotes managed in groups

# BIRDS STOCKLIST - 2020

Preferred Scientific Name	Common Name	Stock 31/12/19			Acquisitions			Births			Deaths			Dispositions			Stock 31/12/20		
		M	F	U	M	F	U	M	F	U	M	F	U	M	F	U	M	F	U
<i>Eudromia elegans</i>	Elegant crested tinamou	3	2	0	0	0	0	0	0	11	0	1	4	0	0	0	3	1	7
<i>Casarius casarius</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	1	1	0	0	0	0	0	0	0	2	2	0
<i>Guttera pucherani</i>	Eastern Crested Guineafowl	3	1	0	0	0	0	0	0	0	1	0	0	0	0	0	2	1	0
<i>Arborophila javanica</i>	Chestnut-bellied tree partridge	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0
<i>Arborophila ginqica</i>	Collared Partridge	3	2	0	0	0	0	0	1	2	0	0	1	1	0	0	2	3	1
<i>Rollulus rouloul*</i>	Crested wood partridge	6	5	0	3	0	0	0	0	0	6	5	0	0	0	0	3	0	0
<i>Tragopan caboti</i>	Cabot's tragopan	5	2	0	0	0	0	3	1	0	0	0	0	0	1	0	8	2	0
<i>Lophophorus impejanus</i>	Himalayan impeyan pheasant	1	1	0	0	0	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	1	0	0	1	0	0	0	1	0
<i>Lophura edwardsi</i>	Vietnam pheasant	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0
<i>Chrysolophus amherstiae</i>	Lady Amherst's pheasant	1	2	0	0	0	0	0	0	0	1	1	0	0	1	0	0	0	0
<i>Polyplectron chalcurum</i>	Bronze-tailed peacock pheasant	2	1	0	0	0	0	0	0	0	0	0	0	0	0	0	2	1	0
<i>Polyplectron inopinatum*</i>	Rothschild's peacock pheasant	1	1	0	0	0	0	1	1	0	0	0	0	0	0	0	2	2	0
<i>Polyplectron napoleonis</i>	Palawan peacock pheasant	3	3	0	0	0	0	0	0	0	0	0	0	0	0	0	3	3	0
<i>Argusianus argus</i>	Great argus	1	2	0	0	0	0	0	0	2	0	0	0	0	1	0	1	1	2
<i>Afropavo congensis</i>	Congo peacock	1	1	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0
<i>Dendrocygna autumnalis autumnalis</i>	Southern black-bellied whistling duck	0	0	0	0	0	4	0	0	0	0	0	0	0	0	0	0	0	4
<i>Dendrocygna viduata</i>	White-faced whistling duck	0	0	47	0	0	0	0	0	8	0	1	5	0	0	0	0	0	43
<i>Thalassornis leuconotus leuconotus</i>	African white-backed duck	1	2	0	0	0	0	0	0	0	0	0	0	0	0	0	1	2	0
<i>Amazonetta brasiliensis</i>	Brazilian teal	0	0	0	3	2	0	0	0	0	0	0	0	0	0	0	3	2	0
<i>Anas capensis</i>	Cape teal	0	0	9	0	0	0	0	0	0	0	0	0	0	0	0	0	0	9
<i>Anas erythrorhyncha</i>	Red-billed pintail	2	1	0	0	0	0	0	0	0	0	0	0	0	0	0	2	1	0
<i>Aythya baeri</i>	Baer's pochard	4	0	19	0	0	0	0	0	4	0	1	4	4	0	0	0	0	18
<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	5	1	0	0	0	0	0	0	0	0	0	0	0	0	5	5	1
<i>Cairina moschata</i>	Muscovy duck	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	1	1	0
<i>Callonetta leucophrys</i>	Ringed teal	0	0	0	3	3	0	0	0	0	0	1	0	0	0	0	3	2	0
<i>Marmaronetta angustirostris*</i>	Marbled teal	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3
<i>Neochen jubata</i>	Orinoco goose	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	1	1	0
<i>Oxyura leucocephala</i>	White-headed duck	3	4	11	0	0	0	0	0	2	3	0	0	0	0	0	1	4	12
<i>Sarkidiornis melanotos</i>	African comb duck	1	5	0	0	0	0	0	0	0	0	0	0	0	0	0	1	5	0
<i>Tadorna ferruginea</i>	Ruddy shelduck	2	7	0	0	0	0	0	0	0	0	1	0	0	2	0	2	4	0
<i>Spatula hottentota</i>	Hottentot teal	4	0	0	0	2	0	0	0	0	0	0	0	0	0	0	4	2	0
<i>Asarcornis scutulata</i>	White-winged duck	1	1	0	0	0	0	0	0	0	0	1	0	0	0	0	1	0	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 ruber</i>	Caribbean Flamingo	56	46	11	4	0	0	0	0	18	2	2	3	6	0	0	52	44	26
<i>Caloenas nicobarica</i>	Nicobar pigeon	5	6	7	0	0	0	0	1	0	1	0	0	0	0	0	4	7	7
<i>Chalcophaps indica</i>	Emerald Dove	9	7	0	0	0	0	1	0	4	2	1	2	0	0	0	8	6	2
<i>Columba livia*</i>	Rock dove	0	0	1	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0
<i>Ducula bicolor*</i>	Pied imperial pigeon	3	2	1	0	0	0	0	0	0	0	0	0	0	0	0	3	2	1
<i>Galliolumba criniger</i>	Mindanao bleeding heart dove	4	3	0	0	0	0	4	0	0	0	0	0	4	0	0	4	3	0
<i>Galliolumba luzonica</i>	Luzon bleeding heart dove	7	4	0	0	0	0	0	0	2	0	0	1	0	1	0	7	3	1
<i>Galliolumba rufiqua</i>	Cinnamon ground dove	4	6	0	0	0	0	0	2	1	1	1	1	0	2	0	3	5	0
<i>Goura victoria</i>	Victoria crowned pigeon	4	3	0	0	1	0	0	2	0	0	0	0	0	0	0	4	6	0
<i>Otidiphaps aruensis</i>	White-naped pheasant-pigeon	3	3	0	0	0	0	0	0	2	0	2	2	0	0	0	3	1	0
<i>Ptilinopus melanospilus</i>	Black-headed fruit-dove	2	2	0	0	0	0	1	0	2	0	1	2	0	0	0	3	1	0
<i>Ptilinopus porphyrea</i>	Pink-headed fruit dove	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	1	1	0
<i>Ptilinopus superbus</i>	Superb fruit dove	10	3	0	0	0	0	1	3	7	0	1	5	0	0	0	11	5	2
<i>Streptopelia risoria</i>	Java (Barbary) Dove	20	7	0	0	0	0	0	0	0	12	0	0	0	0	0	8	7	0
<i>Treron vernans</i>	Pink-necked pigeon	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	1	1	0
<i>Treron waalia</i>	Bruce's green pigeon	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1	0	0
<i>Zenaida graysoni</i>	Socorro dove	2	1	0	0	0	0	0	0	0	0	0	0	0	0	0	2	1	0
<i>Nesoenas mayeri</i>	Pink pigeon	3	7	0	0	0	0	0	0	0	0	0	0	0	4	0	3	3	0

<i>Tauraco schalowi</i>	Schalow's turaco	2	3	0	0	0	0	0	0	0	2	0	0	0	0	0	2	3	2
<i>Tauraco leucotis</i>	White-cheeked turaco	1	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0
<i>Tauraco leucolophus</i>	White-crested turaco	1	1	0	0	0	0	0	0	1	1	0	0	0	0	0	1	2	1
<i>Musophaga violacea</i>	Violet turaco	1	2	0	0	0	0	0	0	0	0	1	0	1	1	0	0	0	0
<i>Eurypyga helias</i>	Sunbittern	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1	1	0
<i>Porphyrio porphyrio</i>	Purple swamphen	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0
<i>Balearica pavonina pavonina</i>	West African Crowned Crane	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0
<i>Balearica regulorum</i>	Grey crowned-crane	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0
<i>Bugeranus carunculatus</i>	Wattled crane	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0
<i>Spheniscus humboldti</i>	Humboldt penguin	21	25	0	0	0	0	0	0	13	1	1	8	0	0	0	20	24	5
<i>Ciconia nigra</i>	Black stork	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0
<i>Eudocimus ruber</i>	Scarlet ibis	5	2	0	11	10	0	0	0	0	1	1	0	0	0	0	15	11	0
<i>Geronticus eremita</i>	Waldrapp ibis	14	8	0	0	0	0	0	0	0	1	0	0	0	0	0	13	8	0
<i>Platalea ajaja</i>	Roseate spoonbill	3	2	0	0	0	0	0	0	0	0	0	0	0	0	0	3	2	0
<i>Scopus umbretta</i>	Hamerkop	2	3	0	0	0	0	4	0	0	0	0	2	2	0	4	1	0	0
<i>Himantopus himantopus mexicanus</i>	Black-necked stilt	0	0	0	1	2	0	0	0	0	0	0	0	0	0	0	1	2	0
<i>Vanellus armatus</i>	Blacksmith lapwing	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0
<i>Otus megalotis</i>	Luzon Lowland Scops Owl	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0
<i>Ptilopsis leucotis</i>	Northern white-faced owl	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0
<i>Pulsatrix perspicillata</i>	Spectacled owl	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0
<i>Strix leptogrammica</i>	Brown wood owl	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0
<i>Strix uralensis</i>	Ural owl	1	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0
<i>Aegypius monachus</i>	European Black Vulture	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0
<i>Gyps africanus</i>	African white-backed vulture	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	2	0	0
<i>Trigonoceps occipitalis</i>	White-headed vulture	0	0	0	2	0	0	0	0	0	1	0	0	0	0	0	1	0	0
<i>Sagittarius serpentarius</i>	Secretary bird	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1	0	0
<i>Urocolius macrourus</i>	Blue-naped mousebird	6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	6	0	0
<i>Trogon collaris</i>	Collared trogon	2	2	0	0	1	0	6	1	2	0	0	2	3	1	0	5	3	0
<i>Tockus erythrorhynchus</i>	Red-billed hornbill	1	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0
<i>Buceros rhinoceros silvestris</i>	Rhinoceros hornbill	2	4	0	0	0	0	0	0	0	0	0	0	0	0	0	2	4	0
<i>Buceros bicornis</i>	Great Hornbill	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0
<i>Penelopides panini panini</i>	Visayan tarictic hornbill	2	2	0	0	0	0	2	0	0	0	0	0	0	0	0	4	2	0
<i>Rhabdotorhinus corrugatus</i>	Wrinkled hornbill	2	1	0	0	0	0	0	0	0	0	0	0	0	0	0	2	1	0
<i>Coracias caudatus</i>	Lilac-breasted roller	1	1	0	0	0	0	0	1	0	0	0	0	0	0	0	1	2	0
<i>Psilopogon pyrolophus</i>	Fire-tufted barbet	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
<i>Megalaima oorti</i>	Black-browed barbet	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
<i>Pteroglossus viridis</i>	Green aracari	1	1	0	0	0	0	1	0	0	1	0	0	0	0	0	1	1	0
<i>Trichoglossus forsteni forsteni</i>	Scarlet-breasted lorikeet	0	0	0	1	2	0	0	0	0	0	0	0	0	0	0	1	2	0
<i>Trichoglossus forsteni mitchellii</i>	Mitchell's lorikeet	3	2	0	0	0	0	1	2	1	0	0	0	0	0	0	4	4	1
<i>Trichoglossus johnstoniae</i>	Mount Apo Lorikeet	7	3	0	0	0	0	0	0	3	1	2	3	1	0	0	5	1	0
<i>Lorius garrulus flavopalliatius</i>	Yellow-backed chattering lory	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0
<i>Lorius domicella</i>	Purple-naped 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	7	11	0	0	0	0	1	1	2	0	0	2	0	0	0	8	12	0
<i>Loriculus galgulus</i>	Blue-crowned hanging parrot	6	2	5	0	6	0	5	4	5	2	0	4	0	0	0	9	12	6
<i>Anodorhynchus hyacinthinus</i>	Hyacinth macaw	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1	1	0
<i>Ara ambiguus</i>	Buffon's macaw	1	1	0	0	0	0	0	0	2	0	0	0	0	0	0	1	1	2
<i>Ara glaucoularis</i>	Blue-throated macaw	1	3	0	0	0	0	0	0	0	1	0	0	0	0	0	0	3	0
<i>Pyrrhura griseipectus</i>	Gray-breasted parakeet	3	3	0	0	0	0	0	0	0	0	1	0	0	0	0	3	2	0
<i>Amazona lilacina</i>	Lilacine amazon	4	4	0	0	0	0	0	0	2	0	0	0	0	0	0	4	4	2
<i>Cacatua haematuropygia</i>	Red-vented cockatoo	1	2	0	0	0	0	0	0	0	0	0	0	0	0	0	1	2	0
<i>Oriolus chinensis</i>	Black-naped oriole	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	1	1	0
<i>Cissa thalassina</i>	Javan Green Magpie	4	7	0	1	0	0	4	1	3	2	0	3	0	0	0	7	8	0
<i>Cyanopica cyanus</i>	Azure-winged magpie	6	6	0	0	0	0	2	3	0	0	0	0	0	0	0	8	9	0
<i>Urocissa erythrorhyncha</i>	Red-billed Blue Pie	4	2	0	0	0	0	0	0	0	0	0	0	3	1	0	1	1	0
<i>Pycnonotus jocosus</i>	Red-whiskered bulbul	4	4	5	0	0	0	0	0	0	0	1	5	0	0	0	4	3	0
<i>Zosterops eurycricotus</i>	African montane white-eye	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0
<i>Irena puella</i>	Fairy bluebird	6	5	0	0	0	0	1	1	6	1	1	5	2	1	0	4	4	1
<i>Garrulax bicolor</i>	Black & White Laughingthrush	9	5	0	1	0	0	4	8	5	1	1	5	6	2	0	7	10	0
<i>Garrulax palliatus</i>	Grey-and-brown laughing thrush	0	1	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0
<i>Garrulax courtosi</i>	Blue-crowned laughingthrush	3	4	0	0	0	0	0	0	6	0	0	2	0	1	0	3	3	4
<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	13	11	319	0	0	0	0	0	42	2	1	27	0	0	0	11	10	391

<i>Lamprotomis iris</i> *	Emerald starling	2	0	77	0	0	0	0	0	2	0	0	0	2	0	0	0	0	79	
<i>Lamprotomis purpureus</i>	Purple glossy starling	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0
<i>Lamprotomis superbus</i>	Superb starling	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
<i>Lamprotomis regius</i>	Golden-breasted starling	1	1	0	0	0	0	1	0	1	0	0	1	0	0	0	0	2	1	0
<i>Leucopsar rothschildi</i>	Bali myna	1	10	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1	9	0
<i>Mino dumontii</i>	Yellow-faced mynah	1	1	0	0	0	0	0	0	2	0	0	2	0	0	0	0	1	1	0
<i>Onychognathus morio</i>	Red-winged starling	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0
<i>Scissirostrum dubium</i>	Scissor-billed Starling	8	13	0	0	0	0	5	1	4	0	2	4	0	0	0	0	13	12	0
<i>Copsychus saularis</i>	Magpie robin	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0
<i>Cossypha niveicapilla</i>	Snowy-headed robin chat	2	2	0	0	0	0	0	0	1	0	0	1	0	0	0	0	2	2	0
<i>Turdus boulboul</i>	Grey-winged blackbird	2	1	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1	1	0
<i>Garrulax ocellata artemesiaie</i>	White-spotted laughing thrush	3	2	0	0	0	0	0	0	4	0	0	1	0	0	0	0	3	2	3
<i>Leiothrix argenteauris</i>	Silver-eared mesia	4	4	0	0	0	0	0	0	3	1	0	2	0	0	0	0	3	4	1
<i>Leiothrix lutea</i> *	Pekin robin	1	2	56	0	0	0	0	1	13	0	1	3	0	0	0	0	2	4	50
<i>Liocichla omeiensis</i>	Grey-cheeked Liocichla	4	3	0	0	1	0	1	3	1	1	0	1	0	0	0	0	4	7	0
<i>Trochaloxyron milnei</i>	Red-tailed laughing thrush	2	3	0	0	0	0	2	0	2	0	0	2	1	0	0	0	3	3	0
<i>Kittacincla malabarica</i>	White-rumped shama	5	4	0	0	1	0	0	0	0	0	1	0	0	1	0	0	5	3	0
<i>Euplectes afer</i>	Yellow-crowned bishop	7	4	0	0	0	0	0	0	8	0	0	2	0	0	0	0	7	4	6
<i>Foudia madagascariensis</i> *	Red fody	0	0	70	0	0	0	0	0	9	0	0	18	0	0	0	10	0	0	80
<i>Ploceus cucullatus cucullatus</i>	Village Weaver	0	0	45	0	0	0	0	0	3	0	0	2	0	0	0	0	0	0	46
<i>Ploceus nigricollis nigricollis</i>	Black-necked weaver	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0
<i>Estrilda caeruleascens</i>	Lavender waxbill	0	1	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0
<i>Estrilda melpoda</i>	Orange-cheeked waxbill	5	2	0	0	0	0	0	0	0	1	1	0	4	1	0	0	0	0	0
<i>Estrilda astrild</i>	Common waxbill	18	11	6	0	0	0	0	0	23	2	2	17	0	0	0	0	16	9	12
<i>Lagonosticta rara</i>	Black-bellied fire-finch	0	1	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0
<i>Lagonosticta rubricata</i>	African fire-finch	5	0	0	0	0	0	0	0	0	1	0	0	4	0	0	0	0	0	0
<i>Amandava amandava</i>	Red avadavat	2	13	0	0	0	0	0	0	0	0	2	0	0	0	0	0	2	11	0
<i>Amandava subflava</i>	Zebra waxbill	1	1	0	2	5	0	0	0	0	0	1	0	0	0	0	0	3	5	0
<i>Taeniopygia guttata</i> *	Timor Zebra Finch	4	6	0	0	0	0	0	0	0	0	1	0	4	5	0	0	0	0	0
<i>Erythrura tricolor</i>	Tricoloured parrot finch	0	0	0	3	2	0	0	0	0	0	0	0	0	0	0	0	3	2	0
<i>Lonchura maja</i>	White-headed munia	0	0	0	0	0	19	0	0	0	0	0	1	0	0	0	0	11	7	0
<i>Lonchura oryzivora</i> *	Javan sparrow	0	0	233	0	0	0	0	0	9	0	0	220	0	0	0	0	0	0	150
<i>Lonchura fuscata</i> *	Timor sparrow	1	4	0	0	0	0	0	0	0	0	2	0	0	0	0	0	1	2	0
<i>Coccothraustes affinis</i>	Collared grosbeak	1	1	0	1	0	0	0	2	0	0	1	0	0	0	0	0	2	2	0
<i>Icterus oberi</i>	Montserrat oriole	1	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	2	0
<i>Paroaria dominicana</i>	Pope cardinal	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0
<i>Ramphocelus bresilius</i>	Brazilian tanager	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0
<i>Ramphocelus passerinii</i>	Scarlet-rumped tanager	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0
<i>Tangara cyanicollis</i>	Blue-necked tanager	3	1	0	0	2	0	0	0	1	0	3	1	0	0	0	0	3	0	0
<i>Geokichla citrina</i>	Orange-headed thrush	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0
<i>Geokichla dohertyi</i>	Chestnut-backed thrush	6	4	0	0	1	0	2	2	1	0	2	1	4	3	0	4	2	0	0
		454	401	931	45	47	23	54	44	248	53	51	377	56	34	10	457	418	986	
			<b>1786</b>			<b>115</b>			<b>346</b>			<b>481</b>		<b>100</b>			<b>1861</b>			

\* denotes managed in groups

# REPTILES STOCKLIST - 2020

Preferred Scientific Name	Common Name	Stock 31/12/19			Acquisitions			Births			Deaths			Dispositions			Stock 31/12/20		
		M	F	U	M	F	U	M	F	U	M	F	U	M	F	U	M	F	U
<i>Astrochelys radiata</i>	Radiated tortoise	4	6	3	0	0	0	0	0	0	0	0	0	0	0	0	4	6	3
<i>Astrochelys yniphora</i>	Ploughshare tortoise	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3
<i>Malacochersus tornieri</i>	African pancake tortoise	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0
<i>Manouria emys emys</i>	Asian brown tortoise	0	7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	7	0
<i>Batagur borneoensis</i>	Malaysian painted river terrapin	2	0	1	0	0	0	0	0	0	0	0	0	0	0	0	2	0	1
<i>Cuora galbinifrons</i>	Flower-backed Box turtle	1	2	2	0	0	0	0	0	0	1	0	1	1	2	0	0	0	0
<i>Cuora trifasciata</i>	Chinese three-striped box turtle	1	2	1	0	0	0	0	0	0	0	0	0	0	0	1	2	1	0
<i>Cuora zhoui</i>	Zhou's box turtle	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0
<i>Geoclemys hamiltonii</i>	Spotted pond turtle	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
<i>Geoemyda spengleri</i>	Black-breasted leaf turtle	0	5	0	1	0	0	0	0	0	0	0	0	1	0	1	4	0	0
<i>Heosemys grandis</i>	Giant Asian pond turtle	1	1	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0
<i>Heosemys spinosa</i>	Spiny hill turtle	1	2	0	0	0	0	0	0	0	0	0	0	0	0	1	2	0	0
<i>Mauremys annamensis</i>	Annam Pond Turtle	2	1	0	0	0	0	0	0	0	0	0	2	1	0	0	0	0	0
<i>Orlitia borneensis</i>	Malaysian giant pond turtle	1	2	0	0	0	0	0	0	0	0	0	1	0	0	0	2	0	0
<i>Sphenodon punctatus</i>	Tuatara	1	10	2	0	0	0	0	0	1	0	1	0	0	0	1	9	3	0
<i>Acanthosaura capra</i> *	Mountain Horned Lizard	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
<i>Bronchocelea cristatella</i> *	Green Crested Lizard	0	1	6	0	0	0	0	0	4	0	2	0	0	0	0	1	8	0
<i>Gonocephalus bellii</i>	Bell's angle-headed dragon	1	1	4	0	0	0	0	0	0	0	0	0	0	2	1	1	2	0
<i>Gonocephalus chamaeleontinus</i> *	Chameleone forest dragon	1	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0
<i>Hypsilurus magnus</i> *	Arboreal agamid lizard	1	2	4	0	0	0	0	0	0	0	0	0	0	0	1	2	4	0
<i>Uromastyx geyni</i> *	Geyr's spiny-tailed lizard	1	0	3	0	0	0	0	0	0	0	0	0	0	0	1	0	3	0
<i>Calumma parsonii</i>	Parson's chameleon	1	3	0	0	0	0	0	0	0	0	1	0	0	0	1	2	0	0
<i>Furcifer pardalis</i>	Panther Chameleon	5	0	0	0	2	0	0	0	0	1	0	0	2	0	2	2	0	0
<i>Rieppeleon brevicaudatus</i>	Bearded pygmy chameleon	3	3	9	0	0	0	0	0	5	3	3	7	0	0	0	0	0	7
<i>Trioceros montium</i> *	Cameroon two-horned mountain chameleon	2	4	0	0	0	0	0	0	0	0	0	0	0	0	2	4	0	0
<i>Anolis grahami</i> *	Jamaican anole	2	4	11	0	0	0	0	0	32	0	0	24	3	4	7	9	6	0
<i>Anolis leachii</i> *	Antigua anole	3	2	5	0	0	0	0	0	0	0	0	0	0	0	3	2	5	0
<i>Laemanctus serratus</i> *	Casque-headed iguana	2	2	0	0	0	0	0	0	0	1	0	0	0	0	2	1	0	0
<i>Oplurus cuvieri cuvieri</i>	Cuvier's Madagascar swift	2	1	1	0	0	0	0	0	0	0	0	0	0	0	2	1	1	0
<i>Paroedura ibityensis</i>	Madagascar ground gecko	0	0	0	0	0	4	0	0	0	0	0	0	0	0	0	0	4	0
<i>Phelsuma pronki</i>	Pronk's day gecko	1	1	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0
<i>Uroplatus henkeli</i> *	Henkel's leaf-tailed gecko	3	3	2	0	0	0	0	0	3	0	1	0	0	0	3	2	4	0
<i>Smaug mossambicus</i> *	Gorongosa girdled lizard	5	0	0	0	1	0	0	0	0	0	0	0	0	0	5	1	0	0
<i>Zonosaurus laticaudatus</i>	Western girdled lizard	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	2	0
<i>Zonosaurus maxima</i> *	Southeastern girdled lizard	4	1	0	0	0	0	0	0	0	0	0	0	0	0	4	1	0	0
<i>Lacerta agilis</i> *	Sand lizard	5	2	10	0	0	0	0	0	0	0	0	0	0	0	3	8	0	0
<i>Takydromus sexlineatus</i> *	Six-lined grass lizard	4	3	11	0	0	0	0	0	1	6	3	3	0	0	0	5	2	0
<i>Lamprolepis smaragdina</i> *	Philippine tree skink	2	2	5	0	0	0	0	0	7	1	1	3	0	0	1	6	4	0
<i>Plestiodon longirostris</i> *	Bermuda skink	4	6	14	0	0	0	0	0	6	0	1	2	0	0	4	5	18	0
<i>Eutropis multifasciata</i> *	Common sun skink	1	0	0	2	5	4	0	0	10	1	2	4	0	0	2	3	10	0
<i>Lepidothyris fernandi</i> *	Fire skink	1	0	18	0	0	0	0	0	0	0	0	0	0	10	1	0	8	0
<i>Dracaena quianensis</i> *	Caiman lizard	1	1	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0
<i>Diploglossus warreni</i>	Haitian giant galliwasp	2	6	15	0	0	0	0	0	2	0	0	0	0	0	2	6	17	0
<i>Varanus komodoensis</i>	Komodo Dragon	1	1	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0
<i>Varanus melinus</i>	Quince monitor	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0
<i>Varanus prasinus</i>	Emerald monitor	1	1	0	0	0	0	0	0	0	0	1	0	0	0	1	0	0	0
<i>Varanus salvadorii</i>	Crocodile monitor	0	1	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0
<i>Shinisaurus crocodilurus</i> *	Chinese crocodile lizard	1	3	7	0	0	0	0	0	7	0	1	0	0	3	1	3	10	0
<i>Malayopython reticulatus</i>	Reticulated python	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0
<i>Simalia boeleni</i>	Boelen's python	2	3	0	0	0	0	0	0	0	0	0	0	0	0	2	3	0	0
<i>Corallus</i>	Tree boa	0	0	0	0	0	0	0	0	2	0	2	0	0	0	0	0	0	0
<i>Corallus batesii</i>	Emerald tree boa	1	2	0	0	0	0	0	0	0	0	0	0	0	0	1	2	0	0
<i>Boiga dendrophila melanota</i>	Mangrove snake	5	4	0	0	0	0	0	0	0	1	0	4	3	0	1	0	0	0
<i>Elaphe moellendorfi</i> *	One hundred flower ratsnake	1	2	6	0	0	0	0	0	0	0	1	0	0	5	1	2	0	0

<i>Gonyosoma oxycephala</i>	Red-tailed ratsnake	2	1	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1	1	0
<i>Cryptelytrops albolabris</i>	White-lipped Viper	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0
<i>Trimeresurus insularis</i>	White-lipped island pitviper	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	2	0
<i>Trimeresurus venustus*</i>	Beautiful pitviper	0	4	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	2	0
<i>Bitis rhinoceros</i>	Western gaboon viper	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0	0
<i>Vipera berus</i>	Common adder	1	1	0	0	0	2	0	0	0	0	0	0	1	0	0	0	1	1	1
<i>Erepeton tentaculatum</i>	Tentacled snake	4	6	0	0	0	0	0	0	0	1	2	0	0	0	0	0	3	4	0
<i>Tomistoma schlegelii</i>	False gharial	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0
<i>Caiman crocodylus</i>	Spectacled caiman	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0
		97	123	146	3	10	12	0	0	80	16	18	50	14	14	30	80	123	124	
			<b>366</b>			<b>25</b>			<b>80</b>		<b>84</b>			<b>58</b>			<b>327</b>			

\* denotes managed in groups

# AMPHIBIAN STOCKLIST - 2020

Preferred Scientific Name	Common Name	Stock 31/12/2019			Acquisitions			Births			Deaths			Dispositions			Stock 31/12/2020		
		M	F	U	M	F	U	M	F	U	M	F	U	M	F	U	M	F	U
<i>Typhlonectes natans</i> *	Rio Cauca Caecilian	5	2	4	0	0	0	0	0	4	1	1	4	0	0	0	2	3	3
<i>Ambystoma dumerilii</i> *	Lake Patzcuaro salamander	4	3	0	0	0	0	0	0	0	2	1	0	0	0	0	2	2	0
<i>Calotriton arnoldi</i> *	Montseny brook newt	11	8	11	0	0	0	0	0	10	0	0	8	0	0	0	11	8	14
<i>Dendrobates auratus</i> *	Green & black poison dart frog	2	2	2	0	0	0	0	0	0	0	0	0	2	2	2	0	0	0
<i>Dendrobates azureus</i> *	Dyeing Poison Dart Frog	7	5	9	0	0	0	0	0	0	0	0	4	0	0	0	0	0	17
<i>Dendrobates tinctorius</i> *	Dyeing Poison Frog	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0
<i>Phyllobates terribilis</i> *	Golden poison dart frog	2	0	10	0	0	0	0	0	0	2	2	0	2	0	1	2	2	3
<i>Oophaga pumilio</i> *	Strawberry poison frog	0	0	30	0	0	0	0	0	13	0	0	1	0	0	13	0	0	29
<i>Ranitomeya imitator</i> *	Mimic poison frog	1	1	7	0	0	0	0	0	2	0	0	0	0	0	0	1	1	8
<i>Ranitomeya amazonica</i> *	Poison dart frog	0	0	7	0	0	0	0	0	5	0	0	0	0	0	0	0	0	11
<i>Excidobates mysteriosus</i> *	Marañón poison frog	0	0	57	0	0	0	0	0	0	0	0	0	0	0	15	0	0	28
<i>Anotheca spinosa</i> *	Spine-headed tree frog	1	1	6	0	0	0	0	0	2	0	0	1	1	1	7	0	0	0
<i>Trachycephalus resinifictrix</i>	Mission golden-eyed tree frog	1	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0
<i>Heterixalus alboquattatus</i> *	Whitebelly reed frog	0	0	0	0	0	25	0	0	0	0	0	0	0	0	0	0	0	25
<i>Leptodactylus fallax</i>	Mountain chicken frog	1	6	0	4	9	0	0	0	0	2	0	0	0	0	0	5	13	0
<i>Teimatiobius culeus</i> *	Lake Titicaca frog	10	10	22	0	0	0	0	0	0	0	1	0	0	0	0	10	9	22
<i>Mantella aurantiaca</i> *	Golden mantella	21	9	107	0	0	0	1	2	70	1	1	3	0	0	20	21	11	137
<i>Mantella expectata</i> *	Blue-legged mantella	8	4	10	0	0	0	0	0	29	1	0	0	8	4	20	0	0	13
<i>Dyscophus guineti</i>	Sambava tomato frog	0	0	8	0	0	0	0	0	0	0	0	0	0	0	8	0	0	0
<i>Scaphiophryne gottlebeii</i> *	Red rain frog	0	0	3	0	0	0	0	0	0	0	0	0	0	0	3	0	0	0
<i>Scaphiophryne madagascariensis</i> *	Madagascar rain frog	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
<i>Sylvirana maasonensis</i> *	Mao-Son frog	2	2	41	0	0	0	0	0	0	0	0	11	0	0	0	2	2	29
<i>Staurosis guttatus</i> *	Black-spotted rock frog	5	0	0	0	0	0	0	0	0	3	0	0	0	0	0	2	0	0
<i>Staurosis parvus</i> *	Splash frog	0	0	60	0	0	0	0	0	0	0	0	1	0	0	0	0	0	59
<i>Nyctixalus pictus</i> *	Painted Indonesian tree frog	0	0	22	0	0	0	0	0	0	0	1	25	0	0	0	0	0	77
<i>Polypedates ottilophus</i> *	File-eared Tree Frog	3	2	2	0	0	0	0	0	0	0	0	1	3	2	1	0	0	0
<i>Rhacophorus feae</i> *	Fea's tree frog	8	1	1	0	0	0	0	0	0	1	0	0	4	0	0	3	1	1
<i>Mannophryne olmonae</i> *	Poison dart frog	0	6	14	0	0	0	0	0	22	0	0	0	12	29	1	0	0	0
<i>Mannophryne trinitatis</i> *	Trinidad poison dart frog	0	0	52	0	0	0	0	0	0	0	0	0	0	0	0	0	0	52
<i>Aqalychnis moreletii</i> *	Morelet's tree frog	14	4	0	0	0	0	0	0	2	0	0	0	0	0	0	12	4	0
<i>Aqalychnis dacnicolor</i> *	Mexican giant tree frog	4	1	0	0	0	0	0	0	310	1	0	173	0	0	103	3	1	28
<i>Cruxiolhyla sylviae</i> *	Sylvia's tree frog	2	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0
<i>Phyllomedusa trinitatis</i> *	Waxy tree frog	0	0	10	0	0	0	0	0	0	0	0	1	5	5	0	0	0	0
		112	69	496	4	9	25	1	2	467	13	7	235	39	43	194	76	59	557
		<b>677</b>			<b>38</b>			<b>470</b>			<b>255</b>			<b>276</b>			<b>692</b>		

# FISH STOCKLIST - 2020

Preferred Scientific Name	Common Name	Stock 31/12/20			
		M	F	U	
<i>Gnathonemus petersii</i> *	Long-nosed Elephant Trunk Fish	0	0	4	
<i>Barilius ardens</i> *	Barb	0	0	24	
<i>Boraras brigittae</i> *	Barb	0	0	4	
<i>Garra barreimiae</i> *	Omani Blind Cave Fish	0	0	42	
<i>Garra flavatra</i> *	Panda garra	0	0	15	
<i>Notropis chrosomus</i> *	Rainbow shiner	0	0	490	
<i>Puntius pentazona</i> *	Fiveband barb	0	0	25	
<i>Puntius titteya</i> *	Cherry barb	0	0	110	
<i>Rasbora trilineata</i> *	Threelined scissortail rasbora	0	0	699	
<i>Trigonostigma hengeli</i> *	Rasbora	0	0	26	
<i>Dawkinsia assimilis</i> *	Mascara barb	0	0	111	
<i>Dawkinsia filamentosa</i> *	Filament barb	0	0	124	
<i>Dawkinsia tambraparniei</i> *	Tambraparini barb	0	0	62	
<i>Dawkinsia rohani</i> *	Rohan's barb	0	0	3	
<i>Sundadanio axelrodi</i> *	Neon green rasbora	0	0	20	
<i>Pethia padamya</i> *	Odessa barb	0	0	14	
<i>Pethia bandula</i> *	Barb	0	0	15	
<i>Microdevario kubotai</i> *	Cyprinid	0	0	5	
<i>Sahyadria denisonii</i> *	Denison's barb	0	0	71	
<i>Desmopuntius rhomboocellatus</i> *	Barb	0	0	52	
<i>Puntigrus tetrazona</i> *	Sumatra barb	0	0	496	**
<i>Enteromius hulstaerti</i> *	Butterfly barb	0	0	90	**
<i>Opsarius pulchellus</i> *	Barb	0	0	7	
<i>Botia kubotai</i> *	Angelicus loach	0	0	10	
<i>Chromobotia macracanthus</i> *	Clown loach	0	0	4	

<i>Acantopsis choirorhynchus</i> *	Horseface loach	0	0	2
<i>Ambastaia sidthimunki</i> *	Dwarf loach	0	0	5
<i>Gastromyzon borneensis</i> *	Loach	0	0	2
<i>Distichodus noboli</i> *	Nobol distichodus	0	0	3
<i>Distichodus teugelsi</i> *	Distichodus teugelsi	0	0	4
<i>Bathyaethiops greeni</i> *	Tetra	0	0	4
<i>Hemiodus gracilis</i>	Red tail hemiodus	0	0	34
<i>Semaprochilodus insignis</i> *	Insignis	0	0	1
<i>Nannostomus mortenthaleri</i> *	Coral red pencilfish	0	0	6
<i>Gasteropelecus sternicla</i> *	Black Lined Silver Hatchetfish	0	0	1
<i>Hemigrammus coeruleus</i> *	Cerulean tetra	0	0	2
<i>Hyphessobrycon</i> *	Tetra	0	0	22
<i>Hyphessobrycon erythrostigma</i> *	Bleeding heart tetra	0	0	17
<i>Hyphessobrycon pyrrhonotus</i> *	Flame-back Bleeding Heart Tetra	0	0	1
<i>Hyphessobrycon wadai</i> *	Tetra	0	0	30
<i>Hyphessobrycon hexastichos</i> *	Tetra	0	0	76
<i>Hyphessobrycon piranga</i> *	Tetra	0	0	1
<i>Moenkhausia</i> *	Tetra	0	0	16
<i>Moenkhausia pittieri</i> *	Diamond tetra	0	0	50
<i>Nematobrycon palmeri</i> *	Emperor tetra	0	0	125
<i>Paracheirodon axelrodi</i> *	Cardinal tetra	0	0	51
<i>Thayeria boehlkei</i> *	Penguin Tetra	0	0	1
<i>Kryptopterus macrocephalus</i> *	Glass catfish	0	0	17
<i>Synodontis flavitaeniatus</i> *	Striped catfish	0	0	5
<i>Synodontis njassae</i> *	Lake Malawi Upside-down Catfish	0	0	3
<i>Synodontis petricola</i> *	African catfish	0	0	5
<i>Synodontis polli</i> *	Poll's upsidedown catfish	0	0	2
<i>Bunocephalus coracoideus</i> *	Twocolored banjo catfish	0	0	4
<i>Brochis splendens</i> *	Brochis Catfish	0	0	1
<i>Corydoras sterbai</i> *	Sterba's catfish	0	0	30
<i>Corydoras duplicareus</i> *	Corydoras catfish	0	0	11
<i>Ancistrus</i> *	Bristlenose catfish	0	0	25
<i>Baryancistrus demantoides</i> *	Catfish	0	0	6

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<i>Farlowella vittata</i> *	Catfish	0	0	8	
<i>Hemiancistrus dolichopterus</i> *	Bristlenoe Plecostomus	0	0	11	
<i>Sturisoma aureum</i> *	Royal catfish	0	0	5	
<i>Lepadogaster lepadogaster</i> *	Shore clingfish	0	0	5	
<i>Melanotaenia lacustris</i> *	Lake Kutubu Rainbow Fish	0	0	5	
<i>Melanotaenia parkinsoni</i> *	Parkinson's rainbowfish	0	0	18	**
<i>Pachypanchax sakaramyi</i> *	Killiefish	0	0	3	**
<i>Fundulus bermudae</i> *	Bermuda killifish	0	0	43	**
<i>Allotoca zacapuensis</i> *	Zacapu allotoca	0	0	67	
<i>Allotoca diazi</i> *	Pátzcuaro allotoca	0	0	98	**
<i>Ameca splendens</i> *	Butterfly Goodeid	0	0	320	
<i>Characodon audax</i> *	Bold characodon	0	0	87	**
<i>Xenotoca doadrioi</i> *	Redtail splitfin	0	0	492	**
<i>Zoogoneticus tequila</i> *	Crescent Zoe	0	0	83	
<i>Hippocampus abdominalis</i> *	Big-bellied Seahorse	0	0	14	**
<i>Serranus tortugarum</i> *	Chalk seabass	0	0	14	
<i>Pseudanthias squamipinnis</i> *	Sea goldie	0	0	11	
<i>Pterapogon kauderni</i> *	Emporor/Banggai Cardinal Fish	0	0	54	
<i>Chelmon rostratus</i> *	Copperband butterflyfish	0	0	1	
<i>Centropyge tibicen</i> *	Keyhole angelfish	0	0	1	
<i>Nandus nandus</i> *	Ganges leaf fish	0	0	10	
<i>Dario hysignon</i> *	Dario	0	0	17	
<i>Geophagus sveni</i> *	Earth eater	0	0	2	
<i>Nanochromis splendens</i> *	Congo dwarf cichlid	0	0	102	
<i>Paretroplus damii</i> *	Cichlid	0	0	14	
<i>Paretroplus kieneri</i> *	Kieneri cichlid	0	0	14	
<i>Paretroplus menarambo</i> *	Pin Striped Damba	0	0	6	
<i>Amphiprion frenatus</i> *	Tomato Clownfish	0	0	1	
<i>Amphiprion ocellaris</i> *	Common Clownfish	0	0	8	
<i>Chrysiptera hemicyanea</i> *	Yellow-tailed Blue Damsel Fish	0	0	5	
<i>Chrysiptera parasema</i> *	Goldtail damselfish	0	0	1	
<i>Macropharyngodon meleagris</i> *	Leopard wrasse	0	0	5	
<i>Pseudocheilinus hexataenia</i> *	Sixline wrasse	0	0	1	

<i>Pholis gunnellus</i> *	Butterfish	0	0	2	
<i>Lipophrys pholis</i> *	Shanny blenny	0	0	1	
<i>Hypseleotris compressa</i> *	Empire gudgeon	0	0	2	
<i>Gobiodon okinawae</i> *	Golden goby	0	0	3	
<i>Gobiusculus flavescens</i> *	Yellow goby	0	0	4	
<i>Pomatoschistus minutus</i> *	Sand goby	0	0	2	
<i>Siganus vulpinus</i> *	Foxface rabbitfish	0	0	1	
<i>Ctenochaetus tominiensis</i> *	Bristle-tooth Tang	0	0	1	
<i>Zebrasoma flavescens</i> *	Yellow tang	0	0	6	
<i>Parosphromenus filamentosus</i> *	Spiketailed licorice gourami	0	0	2	
<i>Parosphromenus linkei</i> *	Liquorice Gourami	0	0	23	**
<i>Parosphromenus paludicola</i> *	Pallid licorice gourami	0	0	129	**
<i>Parosphromenus opallios</i> *	Licorice gourami	0	0	3	
<i>Parosphromenus phoenicurus</i> *	Gourami	0	0	7	**
<i>Trichopsis vittata</i> *	Croaking gourami	0	0	7	
<i>Trichogaster leerii</i> *	Pearl Gourami	0	0	355	
		0	0	5160	
		<b>5160</b>			

\* denotes managed in groups

\*\* denotes bred in the collection in 2020

# INVERTERBRATES STOCKLIST - 2020

Preferred Scientific Name	Common Name	Stock 31/12/20			
		M	F	U	
<i>Cassiopea</i> *	Frilled upside-down jellyfish	0	0	253	
<i>Euplexaura</i> *	Gorgonian	0	0	1	
<i>Briareum sp.</i> *	Green star polyp	0	0	2	
<i>Lobophytum</i> *	Leather coral	0	0	13	
<i>Sinularia</i> *	Soft Coral	0	0	2	
<i>Sinularia flexibilis</i> *	Slimy leather coral	0	0	27	
<i>Xenia umbellata</i> *	Pulsing xenia	0	0	12	
<i>Anemonia viridis</i> *	Snakelocks anemone	0	0	50	
<i>Entacmaea quadricolor</i> *	Bladdertipped anemone	0	0	3	
<i>Urticina felina</i> *	Northern red anemone	0	0	7	
<i>Metridium senile</i> *	Clonal plumose anemone	0	0	2	
<i>Discosoma</i> *	Umbrella false coral	0	0	420	
<i>Acropora</i> *	Staghorn coral	0	0	2	
<i>Acropora millepora</i> *	Staghorn coral	0	0	1	
<i>Acropora yongei</i> *	Staghorn coral	0	0	2	
<i>Montipora</i> *	Montipora coral	0	0	32	
<i>Montipora confusa</i> *	Encrusting coral	0	0	21	
<i>Montipora danae</i> *	Coral	0	0	6	
<i>Montipora digitata</i> *	Finger coral	0	0	9	
<i>Pocillopora damicornis</i> *	Brush coral	0	0	13	
<i>Stylophora</i> *	Cauliflower coral	0	0	16	
<i>Euphyllia</i>	Crescent coral	0	0	2	
<i>Euphyllia ancora</i> *	Crescent coral	0	0	1	
<i>Plerogyra sinuosa</i> *	Bubble coral	0	0	7	
<i>Duncanopsammia axifuga</i> *	Coral	0	0	6	
<i>Turbinaria mesenterina</i>	Bowl Coral	0	0	1	

<i>Turbinaria peltata</i> *	Bowl Coral	0	0	3	
<i>Turbinaria reniformis</i>	Coral	0	0	1	
<i>Echinopora lamellosa</i>	Encrusting coral	0	0	1	
<i>Favia sp.</i> *	Star coral	0	0	1	
<i>Goniastrea sp.</i> *	Honeycomb coral	0	0	1	
<i>Hydnophora</i> *	Horn coral	0	0	5	
<i>Acanthastrea echinata</i> *	Starry cup coral	0	0	1	
<i>Acanthophyllia deshayesiana</i> *	Doughnut coral	0	0	2	
<i>Blastomussa wellsii</i> *	Pineapple coral	0	0	1	
<i>Micromussa lordhowensis</i> *	Coral	0	0	1	
<i>Galaxea fascicularis</i> *	Ivory coral	0	0	5	
<i>Fungia fungites</i> *	Mushroom coral	0	0	2	
<i>Heliofungia actiniformis</i> *	Inflated mushroom coral	0	0	1	
<i>Porites sp.</i> *	Coral	0	0	4	
<i>Zoanthid</i> *	Anemone	0	0	3	
<i>Trochus</i> *	Snail	0	0	12	
<i>Clithon corona</i> *	Horned nerite	0	0	1	
<i>Marisa cornuarietis</i> *	Giant ramshorn snail	0	0	50	
<i>Pomacea canaliculata</i> *	Apple snail	0	0	50	
<i>Tylomelania</i> *	Freshwater snail	0	0	70	
<i>Strombus</i> *	Fighting conch	0	0	1	
<i>Nassarius</i> *	Sharp-knobbed mud snail	0	0	5	
<i>Nassarius vibex</i> *	Common eastern mud snail	0	0	7	
<i>Partula rosea</i> *	Partula snail	0	0	619	
<i>Partula varia</i> *	Partula snail	0	0	1333	
<i>Bertia cambojiensis</i> *	Vietnamese giant magnolia	0	0	8	
<i>Poecilozonites circumfirmatus</i> *	Lesser Bermuda land snail	0	0	576	
<i>Poecilozonites bermudensis</i> *	Bermuda land snail	0	0	1610	
<i>Hirudinaria manillensis</i> *	Buffalo leech	0	0	2	
<i>Heterometrus longimanus</i> *	Asian forest scorpion	1	1	0	
<i>Pandinus imperator</i> *	Common emperor scorpion	2	2	0	
<i>Cyrtopholis femoralis</i> *	Montserrat tarantula	0	16	42	
<i>Lampropelma violaceopes</i> *	Singapore blue tarantula	0	1	0	

<i>Lasiadora parahybana</i> *	Brazilian salmon tarantula	0	1	0	
<i>Nephila edulis</i> *	Golden orb-weaver	0	7	0	**
<i>Caridina multidentata</i> *	Yamato shrimp	0	0	5	
<i>Neocaridina</i> *	Red Cherry Shrimp	0	0	60	
<i>Cardisoma guanhummi</i> *	Great land crab	0	0	10	
<i>Geosesarma hagen</i> *	'Red Devil' Vampire Crab	73	47	592	**
<i>Periplaneta americana</i> *	American cockroach	0	0	1200	
<i>Therea olegrandjeani</i> *	Cockroach	0	0	200	
<i>Stilpnochlora coulouiana</i> *	Florida Leaf Katydid	33	19	100	**
<i>Phaeophilacris bredoides</i> *	Cricket	0	0	100	
<i>Homoeogryllus xanthographus</i> *	Cricket	0	0	100	
<i>Heteropteryx dilatata</i> *	Malaysian Jungle Nymph	19	24	140	
<i>Phyllium giganteum</i> *	Giant leaf insect	0	66	5	**
<i>Marmessoidea</i> *	Walkingstick	6	10	43	**
<i>Achrioptera manga</i> *	Walkingstick	0	0	286	**
<i>Phasma gigas</i> *	Giant stick insect	-	-	eggs	
<i>Manticora imperator</i> *	Ground beetle	2	2	0	
<i>Dynastes hercules</i> *	Western hercules beetle	0	4	73	
<i>Mecynorrhina ugandensis</i> *	Beetle	1	1	187	**
<i>Graphium agamemnon</i> *	Tailed Jay	0	0	28	
<i>Papilio demoleus</i> *	Lime Swallowtail	0	0	16	
<i>Papilio memnon</i> *	Great Mormon	0	0	5	
<i>Papilio rumanzovia</i> *	Scarlet swallowtail	0	0	21	
<i>Greta oto</i> *	Glasswing	0	0	12	
<i>Danaus plexippus</i> *	Monarch butterfly	0	0	8	
<i>Coenonympha tullia</i> *	Large heath butterfly	0	0	5	
<i>Caligo memnon</i> *	Giant Owl	0	0	33	
<i>Eryphanis polyxena</i> *	Purple Mort Bleu	0	0	20	
<i>Morpho peleides</i> *	Blue Morpho	0	0	85	
<i>Heliconius melpomene</i> *	Postman	0	0	100	
<i>Hypolimnas bolina</i> *	Great Eggfly	0	0	20	
<i>Kallima inachus</i> *	Dead-leaf butterfly	0	0	7	
<i>Salamis parhassus</i> *	Mother-of-Pearl Beaty	0	0	6	
<i>Siproeta stelenes</i> *	Malachite	0	0	35	

<i>Atta cephalotes</i> *	Leafcutter ant	0	0	2	colonies
<i>Polyrhachis dives</i> *	Ant	0	0	1	colony
<i>Ampulex compressa</i> *	Emerald cockroach wasp	198	77	249	**
<i>Apis mellifera</i> *	Honeybee	0	0	3	colonies
<i>Asterina gibbosa</i> *	Cushion Starfish	0	0	1	
<i>Ophiarachna incrassata</i> *	Green Brittle Starfish	0	0	42	
<i>Ophiocomina fragilis</i> *	Brittlestar	0	0	6	
<i>Mespilia globulus</i> *	Colored tuxedo urchin	0	0	9	
<i>Echinus esculentus</i> *	Edible sea urchin	0	0	10	
<i>Psammechinus miliaris</i> *	Shore urchin	0	0	8	
		335	278	9162	
		<b>9775</b>			

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