

Annual Report 2014
Zoological Society of Ireland





LETTER FROM THE PRESIDENT

Dear Member,

The Council of the Zoological Society of Ireland presents the 20th annual report, together with the consolidated audited financial results of Dublin Zoo and Fota Wildlife Park, for the year ended 31 December 2014.

I am delighted to report that 2014 was another very successful year and both our locations achieved record attendances. Dublin Zoo had its fourth consecutive year of one million plus visitors and achieved a record number of 1,076,876 and Fota Wildlife Park had a record 438,114 visitors.

Our operating surplus also achieved a record of €2,721,000 which is of critical importance to the funding of future investments in both our sites.

These results show an impressive response by our visitors to the continued enhancements of the animal habitats in recent years and the progress, detailed in the directors' reports, that both Dublin Zoo and Fota Wildlife Park have made towards reaching the highest standards of animal welfare and visitor experience.

Many of our habitats are now world class and have been visited by zoo professionals from around the world. Council of the Zoological Society is committed to maintaining the progress achieved in animal welfare, conservation, ethical standards, visitor experience, staff working conditions and implementing the visionary plans of the directors of both our locations, Leo Oosterweghel in Dublin and Sean McKeown in Cork.

This progress will be carried out in a measured and responsible manner by the reinvestment of surpluses achieved by both sites.

Members of council acknowledge with thanks the dedication and commitment of the Dublin Zoo and Fota Wildlife teams, our many loyal volunteers, and our directors Leo and Sean who have provided the vision and drive behind the truly magnificent progress achieved in the past year and prior.

Finally I would like to acknowledge the considerable contributions of the council members of the zoological society and the governors of Fota Wildlife Park who have been most generous with their time and expertise and their support to me.

Tom Dunphy
President

(Opposite) Western chimpanzee



NOTICE OF ANNUAL GENERAL MEETING

Notice is hereby given that an Annual General Meeting of the Zoological Society of Ireland will be held at 6pm on Thursday, 17th September 2015 in Haughton House at Dublin Zoo, Phoenix Park, Dublin 8, for the following purposes:-

Agenda

1. Adoption of minutes of the Annual General Meeting of the Zoological Society of Ireland held on Thursday 11th September 2014
2. Receiving the Annual Report of Council
3. Receiving the Annual Report of the Honorary Treasurer and the Consolidated Audited Financial Statements of the Zoological Society of Ireland
4. Appointment of auditors
5. Declaration of Council President

Tony Kearney
Company Secretary
Zoological Society of Ireland
Registered Office: Phoenix Park, Dublin 8



DUBLIN ZOO: DIRECTOR'S REPORT

The birth of three elephants within ten weeks of each other was a major achievement for Dublin Zoo in 2014. For many years the Dublin Zoo team, with the help of international experts, has worked to create a protected contact habitat where an elephant herd can live in a naturalistic environment. The ambitious programme began with the arrival of a female family group in 2006 and continued with the introduction of a bull elephant in 2012. The three births in 2014 are a sign of how successful Dublin Zoo's elephant programme has been. All of the births took place within the herd without any human interference and were problem free.

Preparation by the animal care team was very thorough. Emergency recovery procedures were put in place. Keepers watched the elephants at night via computer, which was linked to three infra-red cameras. They practised taking blood, temperature, saliva, drug enema, eye mucus testing and getting access to the calves' feet. International consultant on elephant management, Alan Rookroft, visited to share expert advice several times during the year. Dr John Bainbridge visited Chester Zoo to study veterinary emergency procedures based on their experience. Some minor changes were made to the elephant house to facilitate protected contact access to the elephant calves for veterinary procedures.

In a new departure, the public were kept informed about the progress of the elephant pregnancies with regular updates. Footage of Yasmin going to sleep on a mound of sand, for example, was made available through the Irish Times and attracted great interest. The Moondance team were on standby to film the births for The Zoo television series.

In July Yasmin gave birth to healthy male calf. The other three females welcomed the calf with very loud calls and grunts. The calf was standing within ten minutes and started to follow the very excited cluster of elephants. They calmed down after an hour or so. A few days later, the herd went outside and the calf was successfully introduced to the bull, Upali. Estimated to be at least 80kg, the calf was healthy and energetic. The behaviour of the herd was fascinating to watch, with the calf always in the centre of the herd enjoying maximum protection. There was great interest from the media when the calf was introduced on 21 July.

In August Anak gave birth to a male calf. Approx 70kg, the birth was greeted once more with vocalisation and interest from the herd. The calf started walking after about ten minutes. Eight hours later, he took first drink from Anak. Three days later, he was strong enough to be allowed out to explore. Bernhardine gave birth to a healthy female calf in September. After ten minutes, the calf was walking and at sunrise she was drinking.



(Above) Asian elephant calves Ashoka and Kavi
(Opposite) Asian elephant Yasmin and her calf Kavi



The Natural Confectionery Company, the new sponsor of The Kaziranga Forest Trail, hosted a naming ceremony at Haughton House for the two male calves, Kavi and Ashoka. Bernhardine's calf was named Samiya after a competition hosted by Dublin Zoo. Visitors from international zoos who came to learn about Dublin Zoo's elephant management included the director of National Zoo, Washington DC, and the design and development team from Artis Zoo, Amsterdam.

Dublin Zoo's elephants in protected contact

October 2006:	Sisters Yasmin and Bernhardine, both pregnant, and Yasmin's daughter, Anak, arrive from Rotterdam
May 2007:	A female Asha born to Bernhardine
June 2007:	The Kaziranga Forest Trail formally opened by An Taoiseach
February 2008:	A male Budi born to Yasmin
July 2012:	Budi departs for bachelor herd
July 2012:	Bull house in The Kaziranga Forest Trail completed and bull elephant Upali arrives from Chester. The integration was very successful
July 2014:	A male Kavi born to Yasmin
August 2014:	A male Ashoka born to Anak
September 2014:	A female Samiya born to Bernhardine



(Above) Sleeping elephants



(Above) Elephant care team

(Opposite) Common zebra foal born in September 2014





For the first time, Dublin Zoo bred two Asian lion cubs. This is a critically endangered species; it is estimated that there are less than 350 left in the wild. Kuno, a male, was born to Suri in August, and Kyna, a female, was born to Sita in September. After a short period of time, both were successfully introduced to their father, Kumar.

Marlon, a pure western chimpanzee imported from La Vallée des Singes in France, was integrated into an all female group in Dublin Zoo to provide leadership and to mate. Mixing chimpanzees can be very problematic. By using a variety of enrichment devices and techniques, the animal care staff showed a great deal of patience and ingenuity in ensuring that the chimpanzees were kept calm during this process.

A group of four male red-capped mangabey arrived from Barcelona Zoo. This is a new species for Dublin Zoo. After quarantine, they were integrated with the western lowland gorilla group. Living in Gorilla Rainforest allows these



(Opposite) Red-capped mangabeys (Above) Western chimpanzee

males, who are not immediately required for breeding, to live quality lives. The presence of this group will enrich the lives of the gorillas and vice versa.

Two male Rothschild giraffe calves were born in Dublin Zoo. In May, Maeve successfully gave birth to her calf. In the past, the animal care team would have isolated the pregnant giraffe before the birth but Maeve is an experienced mother and, with careful preparation, the team let her give birth within the herd. The second calf was born in November to Cocio. In April a young female Rothschild giraffe born at Dublin Zoo was transferred to Fota Wildlife Park in Cork and a young female born at Fota Wildlife Park transferred to Dublin.

Other notable births were a pair of red panda, a female Brazilian tapir, a Sulawesi crested macaque, a female white-crowned mangabey, two Waldrapp ibis chicks, a male white-faced saki monkey and a female zebra, which was the first zebra born at Dublin Zoo for twenty years. Twelve Chilean flamingo chicks successfully hatched, bringing the number of birds in the flock to 82.

As part of the studbook keeper's recommendation, a 14 year old male okapi was transferred from Marwell Zoo in UK to Dublin Zoo. The transportation was flawless and the animal settled in well.

ANIMAL WELFARE AND ETHICS

A confronting ethical challenge for zoos worldwide arose in February 2014 when Copenhagen Zoo euthanized a healthy two-year-old giraffe, which it said was surplus. Despite condemnation by numerous European zoos, the action of Copenhagen Zoo was supported by EAZA as Copenhagen Zoo was not in breach of EAZA guidelines. In Ireland, the story received widespread publicity. Dublin Zoo declared its position in an opinion piece in the Irish Independent: 'Cold, calculated, cynical and callous. These are the words I would use to describe the events that occurred earlier this week in Copenhagen Zoo,' wrote the director, Leo Oosterweghel. It was also noted that a great amount of damage has been done to the social licence under which zoos operate. Dublin Zoo is committed to helping the international zoo community move towards a more intelligent and compassionate way of dealing with animals in their care.

In 2014 the Dutch Government announced that a total ban on the practice of pinioning birds would be

introduced in the Netherlands from 2018 onwards. The Dutch Government also declared its intention to lobby other EU countries to do the same. Dublin Zoo's long term plans to cease pinioning birds took another step as preparations for a great flight aviary for Chilean flamingos got underway as part of Sea Lion Cove and Flamingo Lagoon development. The flight aviary is scheduled to open in 2015.

Dublin Zoo noted with interest a court case in Argentina in which animal rights campaigners filed a habeas corpus petition on behalf of a Sumatran orangutan, aged 29 years. The orangutan was born in a German zoo and transferred to Buenos Aires about nine years later. The campaigners argued that because of orangutans' intelligence and complex way of thinking, they should be treated as a 'person' rather than an object. The court agreed and granted the orangutan the status of 'non-human persons' rather than a thing or an object.



Entrance and Retail

In 2014, the one millionth visitor arrived during Month of the Elephant in October. In celebration of the birth of three elephants, entry tickets during 2014 had an image of an elephant printed on it. The sales in the retail shop continue to improve. The introduction of the elephant range using artwork produced by artist Cathy Callan from the Dublin Zoo elephant book has been very successful. The Dublin Zoo range continues to expand and T-shirts depicting Dublin Zoo animals sell very well.

The Zoo as a Business

In April 2014, the director was named business person of the month by Newstalk radio. This honour reflects a significant aspect of Dublin Zoo's public relations strategy. As the Zoo continues to prosper, there is a popular belief that Dublin Zoo is a government department and is funded by taxpayers' money. Since 2008-09, conscious effort has been put into changing that perception. Opportunities, especially through the business media, have been used to convey the message that the Zoo is a charitable institution and is self-reliant. Sponsors have been sought and all surpluses have been reinvested to fund developments.

Catering

BaxterStorey, the catering company that manages the Dublin Zoo outlets, increased the number of mobile carts to offer visitors additional refreshment facilities at the Play Forest and the African Savanna. BaxterStorey is now selling Maud's ice cream, an Irish award-winning ice cream, to very positive feedback from visitors. For the first time, BaxterStorey advertised the summer vacancies on the Dublin Zoo website. This proved to be a very successful strategy.



*(Above) Catherine Doggett, member of the retail team
(Opposite) Western lowland gorilla at the Gorilla Rainforest*



MAINTENANCE AND DEVELOPMENT

Work on the Sea Lion Cove and Flamingo Lagoon habitat commenced in September 2014. This is a larger investment than African Savanna or Gorilla Rainforest and of greater complexity because of the construction of a very large saltwater pool. The horticulture team cleared vegetation, salvaged good plants and removed trees that were at the end of their lives. The old sealion pool and much of the old infrastructure was demolished. Liquid mud from the lake was deposited in the lake of the African Plains to create an embankment along the shore near the bongos. The Sea Lion Cove and Flamingo Lagoon is scheduled for completion in 2015.

Ryan's Cleaning won the Overall Supervisor award presented by the Irish Contract Cleaning Association. Laurentiu Axinte and his team have kept Dublin Zoo spotless for years.

Satisfactory low-cost, short term solutions for the pyrite problem in the Meerkat Restaurant and in the facilities building were arrived at. Engineering assessments were undertaken and localised repairs completed as recommended.

The new display in the toilet block at the Zoo entrance is very popular, especially with children. Entitled 'Who dung it?', the display consists of the preserved scats of various animals. Advanced museum techniques were used to create the displays.

Unused walls around the Zoo were used to display a variety of nature themed poetry. Vermillion Design selected colours and letter type, and master sign-writer, Colm O'Connor, transcribed them. In other developments,

the large decking at the entrance was fitted with an anti-slip surface.

In July 2014, Johnpaul Jones, a founding partner of Jones and Jones architectural firm of Seattle, was presented with the prestigious United States National Humanities Medal



(Above) Ryans Cleaning team

(Above) Official opening of 'Who dung it?' with Ella Balfe

by President Barack Obama. During his long career, Jones has helped to alter the direction of zoo design worldwide by creating more natural environments for animals. The Dublin Zoo team has been working closely with Jones and Jones and their influence can be seen in major habitats including The Kaziranga Forest Trail, African Savanna and Gorilla Rainforest.

Health and Safety

In October, Dublin Zoo was fined €5,000 without

criminal conviction following prosecution by the Health and Safety Authority. This arose from an incident in August 2013 when a small child and her mother were injured by a Dublin Zoo tapir during a special visit into the Brazilian tapir habitat in the company of an experienced keeper. A tall fence was installed at the tapirs' habitat in response to a request by the Health and Safety Authority. A health and safety consultant has been contracted by the Zoo to make regular visits and advise on health and safety issues.



(Above) Poetry on the Farm House

Horticulture

The Gorilla Rainforest progressed exceedingly well this year as herbaceous plants grew with more height, colour and density. The giant Madeiran borage *Echium pininana*, all self sown at this stage, was particularly good this year; 75 flowering stems can be seen near the South American House, which is a record for Dublin Zoo. Meanwhile steps were taken to reduce the amount of ivy, especially at parts of the boundary where it tends to grow around trees and fences.



The *Libertia* is still showing signs of frost damage from previous winters. The horticulture team cleaned through it and dug many up, especially in the African Savanna where a sparse look is preferred. Several *Libertia* were potted for use as 'sacrificial' plants in animal habitats. The Royal Horticultural Society (UK) sent a taxonomist to see Dublin Zoo's collection of *Libertia*, which is the largest and most diverse in Europe. The visit during flowering was



crucial for the Horticultural Society to do a revision of the genus. As part of the revision, herbarium information will be acquired from New Zealand, Chile, Australia, and the large herbaria based at Kew and Missouri.

An existing polytunnel was re-erected in the nursery, doubling the undercover area for overwintering plants, specifically to keep them drier at the root. This worked extremely well, and helped the horticulture team to grow many ginger family relatives, *Hedychium*, *Roscoea*, and *Cautleya*, which were later planted through The Kaziranga Forest Trail, and *Canna*, which was later planted through Gorilla Rainforest. Large numbers of ferns, *Darmera*, and *Gunnera*, were lifted and split from Zoo stock and potted to be kept as large specimens for the Sea Lion Cove project. Other planting included shade tolerant plants underneath bamboo through The Kaziranga Forest Trail because, with height and maturity, some of the lower screening, which younger shorter bamboo provided, is missing.

The diversity of plants and the design philosophy in Dublin Zoo attracted horticulturalists from Ireland and abroad. These included six horticulturalists from Royal Parks, Powerscourt Estate and the horticulture team from Slimbridge Wetland Centre in the UK.

EDUCATION

The demand for Dublin Zoo's education programmes remained high with 72,836 visitors booked in for a visit through the Education Department. As an innovative way of managing the annual primary school visits in May and June, a new outdoor learning experience, Amazing Animals, took place on the main lawn four times a day from the last week of May to the end of June. Primary school groups learned about the animals in the Zoo and how they were cared for. The children were encouraged to ask questions and to visit the bio-fact table.



*(Above) Teacher Jim McMonagle with a school group
(Above) Volunteers at the bio-fact table on the Great Lawn*

22,244 visitors participated in taught programs catering for all educational levels from early years to post-primary level and Further Education and Training. Content is based on the Department of Education and Skills requirements. The Practical Field Ecology course for Junior and Leaving Certificate students remains one of the most popular options. The course covers the ecology question in the biology syllabus and allows students time to explore the Zoo after completing their field study.

As part of Dublin Zoo's Outreach and Community Education Programme, Zoo teacher and former school principal, Jim McMonagle, visited schools and libraries with a selection of biofacts. In 2014 Jim spoke to 9,302 students.

Dublin Zoo camps and workshops are so popular that although additional places were created in 2014, all 382 places sold out rapidly. Workshops included, amongst others, regular classes for pre-school children, lifelong learning program for adults, bird watching mornings, Pull the plug for science week, the immensely popular workshops during school holidays, and the week-long in-service primary teachers' course, which is approved by the Department of Education and Skills.

The volunteers' contribution continues to be invaluable. It is a core aspect of the educational portfolio and allows the Education Department of the Zoo to provide opportunities where visitors, and especially young people, can learn about the value and care for wildlife, and develop a greater respect for the natural world.

MARKETING

In 2014 the arrival of over 30 new animals including three elephant calves created great marketing opportunities. PSG (incorporating Pembroke Communications), the media communications company contracted by Dublin Zoo, estimated that the value to Dublin Zoo of public relations in 2014 was over €5.7 million. The birth of the elephant calves accounted for over €1.7 million of this. The ten episodes of *The Zoo* on RTÉ television, the Christmas special and the repeats of *The Zoo* are not taken into account in this calculation.

Dublin Zoo received a major boost when The Natural Confectionery Company became sponsor for The Kaziranga Forest Trail. They are a creative and family friendly brand. The partnership is a great fit for both parties and will contribute to the upkeep of The Kaziranga Forest Trail and conservation programmes in the wild.

The public relations and marketing campaign associated with the birth of three elephant calves was the biggest campaign in Dublin Zoo's history. The strategy was to share all aspects of Dublin Zoo's elephant story and to bring people on a journey from the announcements of the pregnancies to the births. It culminated in a month-long celebration of the elephants across the city in October. Dublin City Council, The Natural Confectionery Company and Dublin Zoo joined together to create Month of the Elephant. Highlights included a twenty-page magazine about the elephants, which was sent to over 50,000 primary school children; elephant themed literature being promoted in every library in Dublin; and events in the Zoo such as 'Wake up with the elephants' and sketching mornings with artist Cathy Callan. Flags, banners and posters were placed around the city. There was a weekend

celebration with the Lord Mayor at the Mansion House. Elephant crates were put in key locations around city, including the Mansion House, Grafton Street and O'Connell Street. A flash mob of 30 people in elephant costume circulated the city at peak times appearing on the Luas, the Viking splash tour and on Dublin bikes. Statues including those of Oscar Wilde and Molly Malone were dressed in elephant trunks and ears. Dublin Zoo hosted a trail around the city on 18 and 19 October in which hundreds of families participated. The Irish Independent produced a 32 page supplement about the elephants of Dublin Zoo, which they promoted heavily. And the Late Late Show on RTÉ gave a free adult and child pass to every member of the audience on night in October.



(Above) Elephant month signage around Dublin city

(Above) Lord Mayor of Dublin Christy Burke welcomes the elephants to Dublin city



Strategic promotions played a key role in increasing footfall during the shoulder and off-peak months. One of the more successful promotions was with An Post whereby Dublin Zoo

was advertised in all post offices and on post-boxes nationwide. Fyffes ran a Child goes free promotion on Freddy Fyffes bananas, which also gave excellent exposure during off-peak times. Other promotions included McDonalds, Tesco, The Irish Independent, The Herald, The Star, 98FM, Today FM and 2FM.

Dublin Zoo teamed up with RTÉ's young peoples' programme, Elev8, to create an interactive digital sticker album app called Elev8 goes to the Zoo. Dublin Zoo also worked with RTÉ Junior to create a wildlife app hosted by RTÉ Junior. A keeper had a fortnightly interview slot on Elev8.

Dublin Zoo collaborated with the Irish Independent to run a photo competition in which people were asked to submit their Wishing Chair photos taken over the past decades. Due to the high volume of entries, a montage of best entries featured in a double page spread.

The fifth series of The Zoo by Moondance aired on RTÉ One in springtime for ten weeks. The series remained as popular as ever with an average weekly viewership figure of 350,000 and a peak of 400,000. The series gained a significant amount of media coverage during its ten week run. The Zoo is being shown in Denmark, the UK, the Netherlands, Thailand, and in Belgium where it has 1.2 million viewers.

(Above) Marketing and Events team

Social media now supports all of the activity of the marketing team in Dublin Zoo. Facebook fans increased in 2014 by 86,615, bringing the figure to 194,877. This is a noteworthy achievement because all social media growth is natural and does not come from advertising spend. Twitter is also growing year on year with 20,286 followers by the end of 2014.

Other highlights included the visit by international superstar Beyoncé, which gained worldwide media coverage. And Conor Pope of the Irish Times spent a day at the Zoo and wrote a cover feature for the Irish Times magazine. Dublin Zoo was awarded Best Date Place in the 98fm Best of Dublin awards. Dublin Zoo also won 98FM Best family spot in the same awards.

Events

There was a particular focus on seasonal activity at Dublin Zoo in 2014 and events such as St Patrick's Day, Easter family events, summer night BBQs, Halloween celebrations were featured in national and regional media. Dublin Zoo hosted 400 people over two mornings for Valentine's Day. Guests were given early access to the Zoo, a picnic breakfast, a rose and tours. In contrast to many family events organised in Dublin Zoo, the Date Mornings appealed to young couples. The morning sold out and feedback was excellent. Other events included Wake up with the elephants for ten families who won a competition in Irish Independent.

The small Events team was very active with 114 birthday parties, seven weddings, 44 corporate events, three large corporate groups, and two social family events. A total of 14,633 guests attended events in the Zoo in 2014.

CONSERVATION

In 2014 Dublin Zoo continued to support international breeding programmes, and in-situ conservation projects in Ireland and abroad.

The Southern White Rhino

In May, Ken Mackey, keeper in the African Plains team, visited the Lowveld Rhino Trust in Zimbabwe with the support of Dublin Zoo. He worked with the team there to remove the horns from living rhinoceros to prevent these animals from being poached. Dublin Zoo sent €5,000 to the Lowveld Rhino Trust as part of a much larger donation coordinated by Save the Rhino International. Following Ken's visit, the Zoo made an additional €6,000 contribution. The money is used for a community incentives programme, through which local schools are given cash grants based on the number of calves born in the Save Valley and Buby Valley Conservancies. On World Rhino Day in September, many activities raised €557.96, which Dublin Zoo matched euro for euro.



(Above) Keeper Ken Mackey visited the Lowveld region in southern Zimbabwe

With highly publicised thefts of rhino horns from museums and homes in Ireland and around Europe, Dublin Zoo has made a considerable investment in security to protect its own herd of rhinoceros.

Painted dogs

Painted dogs are a challenging species to keep as their social structure is complex and ever changing. At a workshop on painted dogs at Gaia Zoo, The Netherlands, attended by African Plains team leader Helen Clarke, it was announced that European Zoos, including Dublin Zoo, had raised US\$155,000 for Painted Dog Conservation in Zimbabwe. In September, Rob van der A visited Dublin Zoo and sold animal figures made by local people from recycled wire; the wire had been taken from snares used to trap painted dogs in Zimbabwe.

Okapi

During the year, Dublin Zoo donated €5,000 to the Okapi Conservation Project (OCP). In a letter of thanks, John Lukas, president of the Project, said 'Recent victories over rebel forces by UN and Congolese military forces and the elimination of several organized poaching gangs has restored relative security to the Okapi Wildlife Reserve. OCP educators and agro forestry experts can now safely travel around the Reserve bringing the message of sustainable resource use and much needed social assistance to communities living inside and bordering the Okapi Wildlife Reserve.'

Chimpanzees

In response to a letter from the Tacugama Chimpanzee Sanctuary in November, Dublin Zoo sent the sanctuary a donation of €3,000. 50% of the Sanctuary's income had

come from visitors to the Sanctuary and its eco-lodges, and from fee-based research. Following the outbreak of Ebola in Spring 2014, both of these sources of income had dried up.

Sumatran Tigers

In July, the director received a letter from Gracie Law, age 8. She had visited the Zoo with her sister and a friend and had seen a sign stating that the Sumatran tigers are endangered. The three girls put on a stall and raised €35.14. The director wrote a letter of thanks and enclosed an official receipt from the financial controller. Letters from children are always answered by the director and in less than three days as children experience time differently from adults.

The Zoo Television Series

In 2014, with support from Dublin Zoo, Moondance accompanied keepers Susan O'Brien to Brazil to film conservation work with the golden lion tamarin, and Ken Mackey to Zimbabwe to film conservation work with the southern white rhinos and the painted dogs. Dublin Zoo financially supports in situ conservation of these species. Moondance film footage will be included in future episodes of the TV series, *The Zoo*.



*(Above) Moondance team John Higgins and Shane Brennan with Susan O'Brien in Brazil
(Above) Keeper Susan O'Brien in Brazil*

Other conservation projects supported by Dublin Zoo in 2014 included:

- WAPCA – West African Primate Conservation Action (includes conservation of white-naped mangabeys)
- Mbeli Bai Study (western lowland gorillas)
- The Orangutan Project
- Selamatkan Yaki (Sulawesi-crested macaques)
- GERP (Groupe d'Etude et de Recherche sur les Primates de Madagascar) Red ruff lemur project: 'Assessing the feasibility of a reintroduction programme of red ruffed lemur in Farankaraina, Northeastern Madagascar.'
- Snow Leopard Trust
- Red Panda Forest Guardian Programme
- Mountain Bongo Surveillance Project
- Scimitar-horned oryx reintroduction project in Tunisia
- Rothschild's Giraffe Project
- Sphenisco (Humboldt penguins)
- Citron-crested cockatoo population survey on Sumba, Indonesia – ZGAP (Zoological Society for the Conservation of Species and Populations)
- Conservation Breeding Specialist Group
- Frozen Ark Project

Native Fauna Conservation

- Northern lapwing conservation – habitat creation and satellite tagging of chicks – Irish Grey Partridge Conservation Trust
- White-tailed sea eagle monitoring and public awareness project – Golden Eagle Trust
- Girley Bog Conservation - Irish Peatland Conservation Council
- Barn owl conservation – BirdWatch Ireland
- Little tern conservation at Baltry – Louth Nature Trust

- Native Species Weekend
- Monitoring nest-boxes for wild birds within the Zoo
- Rothamsted light-trap – monitoring moths within the Zoo

Research

Dublin Zoo focuses on research that has a direct benefit to the animals in the Zoo (e.g. improves husbandry), to the species in general (e.g. has a conservation value) or to the operations of Dublin Zoo (e.g. visitor studies). Research is conducted in various guises, including Dublin Zoo team studies, Dublin Zoo volunteer studies, third level student projects, and multi-zoo studies. Dublin Zoo is also engaged in horticultural research through its horticulture team.

Animal Research

The keepers are ideally placed to conduct research projects as they understand the needs of animals in their care. In 2014, a wide variety of topics were researched by the Dublin Zoo team:

- Keeper Louise McDermott continued her research into the flamingo breeding ecology in Dublin Zoo.
- Keeper Brendan Walsh continued collecting data on the elephants' sleep patterns using infrared recordings taken at night.
- Team-leader Helen Clarke and keeper Alan Duffy continued the multi-zoo study investigating unexpected collapsing in giraffes at European zoos.
- Dublin Zoo volunteers continued to take observational data on the behaviour of the gorilla group in Gorilla Rainforest. Collecting data on the red-capped mangabeys living with the gorillas was commenced.
- Registrar/Research and Conservation Coordinator,

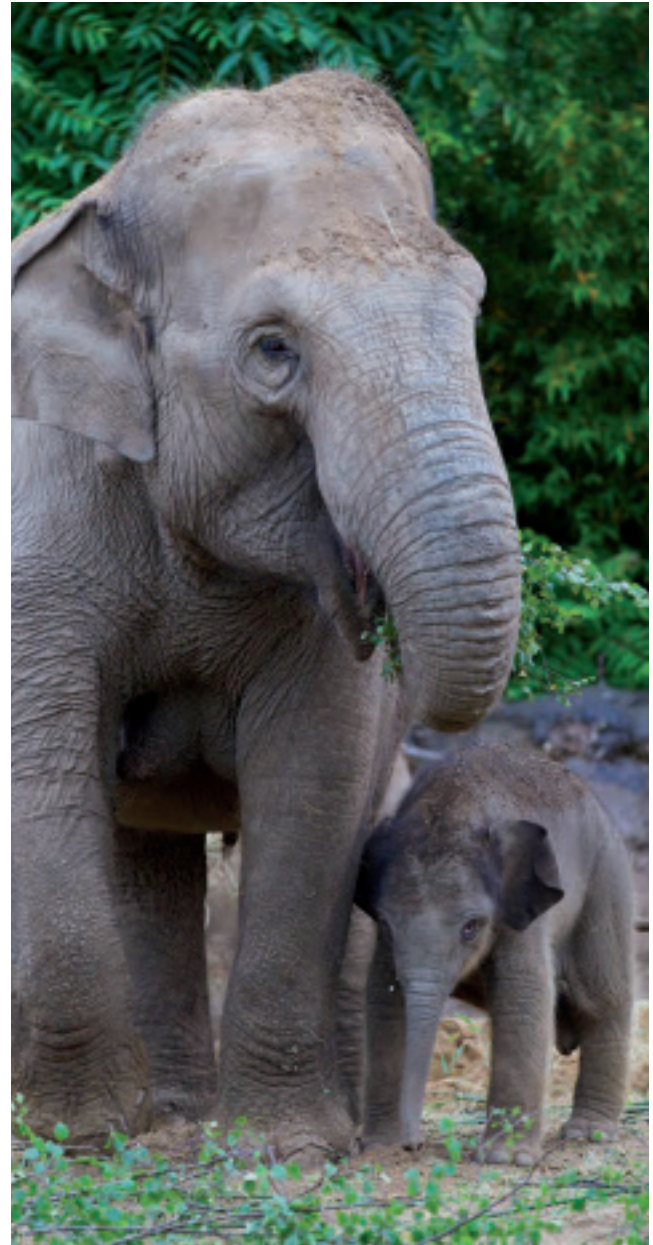
Sandra Molloy, began research into the causes of mortality on the Moluccan cockatoo EEP (European Endangered Species Programme).

Horticulture Research

- Dublin Zoo is the collection holder for the genus *Libertia* for Ireland and Britain and as such holds the most species. Curator of Horticulture Stephen Butler has identified some naming and identification issues with this genus and is working with the Royal Horticultural Society in England to investigate this further.
- The horticulture team continued their investigations into maintaining mud-free grass areas in some of the animal habitats. Regular use of certain areas causes the ground to become parched, meaning water cannot drain through and this results in very wet, muddy areas.

Native Species Research

- Dublin Zoo continued operating the Rothamsted light-trap, which collects data on moths present in the vicinity of the trap.
- Registrar/Research and Conservation Coordinator, Sandra Molloy, collected data on nesting birds from bird-boxes around the Zoo and submitted this information to the British Trust for Ornithology.



(Above) Asian elephant Yasmin and her calf Kavi

Multi-zoo research

Many research projects require data collection from more than one zoo. Where possible, Dublin Zoo is happy to assist especially if endorsed by an EEP (European Endangered Species Programmes) or ESB (European Studbooks) coordinator. In 2014, Dublin Zoo contributed to the following:

- Flamingo social network analysis (PhD) – University of Exeter, U.K.
- Epidemiology and molecular biology of Elephant Endotheliotropic Herpesvirus 1 (EEHV1) in the Asian elephant (PhD) – University of Nottingham, UK and endorsed by BIAZA.
- Interventions to alleviate behavioural pathologies in zoo primates (MSc) – Oxford Brookes University, UK.
- Error rates when visually identifying eastern bongo (MSc) – University of Kent and endorsed by the eastern bongo EEP.
- Impact of hormonal contraceptives on the behaviour and welfare of white-faced saki monkeys (MSc) – University of Plymouth and endorsed by the white-faced saki EEP.
- Utilisation of specialist software and management approaches amongst conservation practitioners (MSc) – Plymouth University and endorsed by BIAZA.
- Dietary analysis of siamangs to investigate if there is a link between nutrition and the sex ratio in the European population (BSc) – Bishop Burton College (UK) and endorsed by the siamang EEP.
- An overview of potential breeding issues in white rhinos in European zoos (BSc) – University of Nottingham, UK and endorsed by the white rhino EEP.
- Research into the diets of red pandas in zoos in Ireland

and Britian (Dip) – Sparsholt College.

- Developing a husbandry manual for pied pigeons – Charles Stuart University, Australia.
- Use and effect of contraception in a number of Old World monkey species – EAZA Monkey TAG.

In addition to the above, Dublin Zoo regularly contributes data to the European Group on Zoo Animal Contraception to help create best practices when using contraception.

Spreading The Word...

Sharing knowledge and research about animal care and in situ conservation among zoo professionals is fundamental to the work of the today's zoo. It allows zoos worldwide to cooperate with each other in the advancement of the care they provide for animals. It also supports their work with in situ conservation programmes.

Dublin Zoo provides support to team members so they can attend conferences and workshops. It also hosts conferences and workshops. Team members are encouraged to present their knowledge and to learn from other professionals. Where possible, research findings are published in zoo publications and journals.

January

Zoo veterinarian, John Bainbridge, attended a seminar in London Zoo on great ape health, focusing on the heart and Brucella.

Jonny Hanson, University of Cambridge, gave a presentation on his research on snow leopards in Nepal.

February

Keeper, Brendan Walsh, gave a presentation on the data collected via infrared cameras on elephant sleep patterns in Dublin Zoo at night.

Registrar/Research and Conservation Coordinator, Sandra Molloy, attended the Advanced Breeding Programme Management course at the EAZA head office in Amsterdam.

Keeper, Susan O'Brien, visited the headquarters of the Golden Lion Tamarin Association in Brazil.

March

International consultant on sea lion management, Peter Bloom from Parrot and Seal, UK, came to Dublin Zoo to advise on sea lion training and the development of the Sea Lion Cove and Flamingo Lagoon habitat.

Team-leader, Helen Clarke, attended the Painted Dog Workshop in GaiaZoo, the Netherlands.

Keepers, Yvonne McCann, Mel Sheridan and Brendan Walsh, attended the ABWAK (Association of British and Irish Wild Animal Keepers) conference in Chester Zoo.

Keeper, Brendan Walsh, presented a talk entitled *Asian elephant sleep study at Dublin Zoo* at the ABWAK conference in Chester Zoo.

April

Dublin Zoo hosted a meeting of the Conservation and Research Committee where representatives from Belfast Zoo, Dublin Zoo and Fota Wildlife Park discussed

conservation and research interests and potential collaborative projects. During the meeting there were two presentations:

- John Lusby, BirdWatch Ireland, gave a presentation on the barn owl conservation project, which is supported by Belfast Zoo, Dublin Zoo and Fota Wildlife Park.
- Keeper, Susan O'Brien, gave a presentation on her visit to Brazil where she observed the conservation work of the Golden Lion Tamarin Association.

The horticulture team hosted a visit of a team from The Royal Parks, London, who were interested in Dublin Zoo's most recent habitat developments and how plants are used.

The horticulture team hosted the Dalkey Garden School, who were interested in habitat design, plant use, mulches, and other related topics.

May

Curator of Horticulture, Stephen Butler, attended the EAZA Zoo Horticulture Conference in Barcelona Zoo. While there, Stephen visited Cosmocaixa Foundation, Collserola National Park, Botanic Gardens Barcelona, Valencia Botanic Gardens and Valencia Zoo.

Dublin Zoo hosted the Native Species Weekend in partnership with a range of Irish organisations. The aim of the weekend is to highlight native wildlife and what actions everyone can take to protect it.

Dublin Zoo hosted a visit from Greg Carr, Gorongosa National Park (Mozambique).

Julian Shaw, Senior Registrar with the Royal Horticultural Society (UK), visited Dublin Zoo to look at our *Libertia* (perennial plant) collection with a view to revising the nomenclature in this genus.

Keeper, Brendan Walsh, attended the BIAZA Elephant Focus Group meeting at Knowsley Safari Park, England and gave two presentations: *Asian elephant management and diet at Dublin Zoo*, and, *Asian elephant sleep study at Dublin Zoo*.

Keeper, Ken Mackey, visited the Lowveld Rhino Trust and Painted Dog Conservation in Zimbabwe.

Keeper, Yvonne McCann, visited barn owl nest sites with BirdWatch Ireland's John Lusby as part of the Barn Owl Research supported by Dublin Zoo.

July

Dublin Zoo hosted a visit from the horticulture staff from Slimbridge Wetlands Centre (UK) to discuss horticultural techniques.

August

Ron van der A from Painted Dog Conservation came to Dublin Zoo to meet with the Zoo team and sell art made from snare wires retrieved by anti-poaching units.

Dublin Zoo hosted a visit from the Powerscourt Gardens horticulture team who wanted to survey our planting.

September

Operations Manager, Gerry Creighton, was invited to Phoenix Zoo, Arizona to speak at the AZA (American

Association of Zoos and Aquaria) Elephant Care Workshop. He gave two presentations: *Giant Footsteps: Dublin Zoo's Asian Elephant Breeding Programme*; and, *Asian elephant bull introduction at Dublin Zoo*.

Operations Manager, Gerry Creighton, was invited to Albuquerque Zoo, New Mexico as a consultant. While there he gave a number of presentations: including *Giant Footsteps: Dublin Zoo's Asian Elephant Breeding Programme*; *Asian elephant bull introduction at Dublin Zoo*; *Management of the elephant foot care programme*; *Gorilla habitat in Dublin Zoo*; and, *Fighting back: Sumatran tiger breeding*.

Dublin Zoo celebrated World Rhino Day with a range of talks and interactive activities for visitors in order to raise awareness about rhino conservation.

Registrar/Research and Conservation Coordinator, Sandra Molloy, and keeper, Susan O'Brien, attended the EAZA (European Association of Zoos and Aquaria) annual conference in Budapest, Hungary.

Registrar/Research and Conservation Coordinator, Sandra Molloy, attended a parrot conference in Berlin, Germany, organised by ZGAP (Zoological Society for the Conservation of Species and Populations) and gave a presentation on the status of the citron-crested cockatoo and Moluccan cockatoo EEPs (European Endangered species programme).

Several member of the animal care team were enrolled in the diploma course, Management of Zoo and Aquarium Animals, through Sparsholt College, England. This course

is mainly taught via distance learning. The team members in Year 1 are Lee Byrne, Anthony McClure, Gerard Corbally, John-Paul Cranny and Alan Duffy. Mel Sheridan is in Year 2.

October

Cyril Stannard, Cheetah Outreach (South Africa), came to Dublin Zoo to give a presentation on his organisation's conservation work.

Dublin Zoo provided funding for the International Flamingo Symposium in San Diego to help key stakeholders attend the symposium.

Registrar/Research and Conservation Coordinator, Sandra Molloy, attended a Microsoft Excel Level 2 course run by the IACT (International Academy of Computer Training) in Dublin.

November

Operations Manager, Gerry Creighton, gave a presentation to the Trinity College Dublin Zoology Society entitled, *Fighting back: Sumatra tiger and snow leopard breeding at Dublin Zoo.*

Dublin Zoo teamed up with Sustainable Energy Authority of Ireland to host an awareness raising weekend to encourage visitors to reduce the amount of energy they use.

Dublin Zoo provided funding for the International Tapir Symposium in Brazil to help key Brazilian professionals and stakeholders to attend the symposium.

Teacher, Claire Doyle, provided in-house training for Microsoft PowerPoint for the Zoo team.

December

Dublin Zoo hosted a visit from the National Botanic Gardens, Glasnevin, who were here to look at signage and general planting.

Publications

Molloy, S (2014) **Citron-crested cockatoo (*Cacatua sulphurea citrinocristata*) - EEP Annual Report 2013.** Available on www.eaza.net

Molloy, S (2014) **Moluccan cockatoo (*Cacatua moluccensis*) - EEP Annual Report 2013.** Available on www.eaza.net



CENSUS OF ANIMALS IN DUBLIN ZOO DURING 2014

Summary of Census of Animals in Dublin Zoo on 1st January 2015

Taxon	Total Species	Total Specimens
Mammals	41	220
Birds	21	210
Reptiles	20	75
Total vertebrates	82	505
Invertebrates	7	63*

*Approximate numbers

Summary of Births and Hatchings of Animals in Dublin Zoo during 2014

Taxon	Total Species	Total Specimens
Mammals	15	46
Birds	5	40
Reptiles	2	5
Total vertebrates	22	91
Invertebrates	6	X

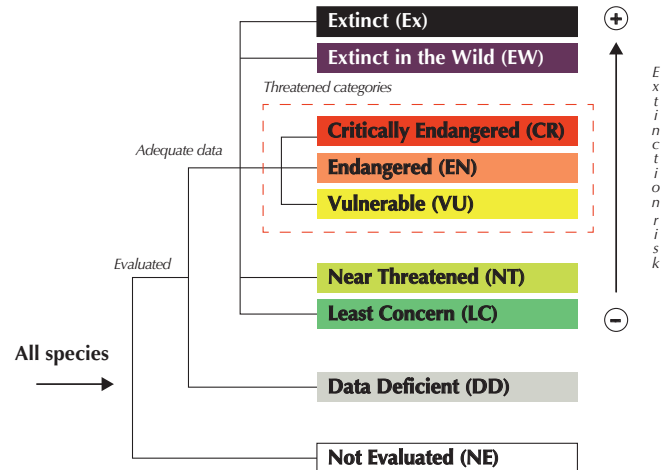
X: Exact numbers not recorded

Summary of European Endangered species Programmes & European Studbooks which Dublin Zoo participated in throughout 2014

Number of European Endangered species Programmes (EEP)	31
Number of European studbooks (ESB)	10

Summary of Animal Species on the IUCN Red List of Threatened Species in Dublin Zoo during 2014

IUCN status	Number of species/ subspecies
Extinct in the wild – EW	1
Critically endangered – CR	8
Endangered – EN	14
Vulnerable – VU	10
Near threatened – NT	7
Least Concern - LC	29
Not Evaluated - NE	14



Source: IUCN 2013. IUCN Red List of Threatened Species. Version 2015.2

Available at: <http://www.iucnredlist.org>.

Downloaded on 17/6/15.

Key to Census Tables Opposite



Part of a European Endangered Species Programme (EEP)

ESB

Recorded in a European studbook








- Column 1:** The number of animals in the collection at 1st January 2014.
- Column 2:** The number of animals received in 2014 through donation, loan or exchange.
- Column 3:** The number of animals born or hatched during 2014.
- Column 4:** The number of animals dying within 30 days of birth or hatching, in 2014.
- Column 5:** The number of animals dying having survived more than 30 days, in 2014.
- Column 6:** The number of animals leaving the collection through presentation, exchange, deposit, theft etc. during 2014.
- Column 7:** The number of animals in the collection at 1st January 2015.

The first figure indicates the male numbers; the second female numbers and the third unsexed numbers e.g. 1.2.4 reads 1 male, 2 females and 4 unsexed specimens.

Male	Female	Unknown
♂	♀	?

This census does not include animals which have been sent on loan to other collections, nor does it include several species, which generally breed well in the gardens.

	IUCN Status	SPECIES		Total at 01.01.14	Arrivals	Births	Dead within 30 Days	Dead	Departed	Total at 01.01.15
		VERTEBRATES	VERTEBRATA							
		CLASS: MAMMALS	MAMMALIA							
		BATS	CHIROPTERA							
	CR	Rodriguez flying fox	<i>Pteropus rodricensis</i>	2.13.0				1.1.0		1.12.0
		PRIMATES	PRIMATES							
	NT	Ring-tailed lemur	<i>Lemur catta</i>	5.3.0						5.3.0
	EN	Red ruffed lemur	<i>Varecia rubra</i>	2.2.0		1.0.4	1.0.4			2.2.0
	VU	Goeldi's monkey	<i>Callimico goeldii</i>	1.1.0		0.0.1				1.1.1
	LC	Eastern pygmy marmosets	<i>Callithrix pygmaea niveiventris</i>	2.2.0		1.1.5	0.0.4	0.1.0		3.2.0
	EN	Golden lion tamarin	<i>Leontopithecus rosalia</i>	1.0.0	0.1.0					1.1.0
		Spider monkey	<i>Ateles sp.</i>	1.2.0						1.2.0
	LC	Bolivian squirrel monkey	<i>Saimiri boliviensis boliviensis</i>	7.0.0						7.0.0
	LC	White-faced saki	<i>Pithecia pithecia</i>	2.1.0		0.1.0				2.2.0
	EN	White-naped mangabey	<i>Cercocebus atys lunulatus</i>	3.5.0		1.0.0			0.1.0	4.4.0
	VU	Red-capped mangabey	<i>Cercocebus torquatus</i>	0.0.0	4.0.0					4.0.0
	CR	Sulawesi crested macaque	<i>Macaca nigra</i>	6.9.0		4.0.0	1.0.0	0.1.0		9.8.0
	EN	Siamang	<i>Symphalangus syndactylus</i>	1.0.0	0.1.0					1.1.0
	CR	Western lowland gorilla	<i>Gorilla gorilla gorilla</i>	2.4.0						2.4.0
	EN	Chimpanzee	<i>Pan troglodytes</i>	2.1.0						2.1.0
	EN	Western chimpanzee	<i>Pan troglodytes verus</i>	0.3.0	1.0.0					1.3.0
	EN	Bornean orangutan	<i>Pongo pygmaeus pygmaeus</i>	1.3.0						1.3.0
		XENARTHANS	XENARTHRA							
	LC	Linne's two-toed sloth	<i>Choloepus didactylus</i>	1.1.0						1.1.0
		RODENTS	RODENTIA							
	NT	Patagonian mara	<i>Dolichotis patagonum</i>	1.0.0				1.0.0		0.0.0
		INSECTIVORES	INSECTIVORA							
	LC	African pygmy hedgehog	<i>Atelerix albiventris</i>	1.0.0						1.0.0
		CARNIVORES	CARNIVORA							
	LC	Grey wolf	<i>Canis lupus</i>	3.4.0				0.2.0		3.2.0
	EN	Painted dogs	<i>Lycaon pictus</i>	2.2.0				2.0.0		0.2.0
	VU	Red panda	<i>Ailurus fulgens fulgens</i>	2.2.0		1.1.0		0.1.0	1.1.0	2.1.0
	VU	Oriental small-clawed otter	<i>Aonyx cinerea</i>	1.0.0					1.0.0	0.0.0
	LC	Slender-tailed meerkat	<i>Suricata suricatta</i>	7.5.0		4.1.3	0.0.2	0.0.1		11.6.0
	EN	Asiatic lion	<i>Panthera leo persica</i>	1.2.0		2.2.4	0.1.4	1.0.0		2.3.0
	EN	Amur tiger	<i>Panthera tigris altaica</i>	1.2.0						1.2.0
	CR	Sumatran tiger	<i>Panthera tigris sumatrae</i>	1.1.0						1.1.0
	EN	Snow leopard	<i>Uncia uncia</i>	1.2.0						1.2.0
	LC	California sealion	<i>Zalophus californianus</i>	2.3.0				1.0.0	1.3.0	0.0.0

	IUCN Status	SPECIES		Total at 01.01.14	Arrivals	Births	Dead within 30 Days	Dead	Departed	Total at 01.01.15
	EN	ELEPHANTS Asiatic elephant	PROBOSCIDAEE <i>Elephas maximus</i>	1.4.0		2.1.0				3.5.0
	LC	ODD-TOED UNGULATES Common/Grant's zebra	PERISSODACTYLA <i>Equus burchelli boehmi</i>	3.4.0		0.1.0		1.0.0		2.5.0
	VU	South American tapir	<i>Tapirus terrestris</i>	3.1.0		0.1.0				3.2.0
	NT	Southern white rhinoceros	<i>Ceratotherium simum simum</i>	3.4.0						3.4.0
	LC	EVEN-TOED UNGULATES Red river hog	ARTIODACTYLA <i>Potamochoerus porcus pictus</i>	3.6.0						3.6.0
ESB	VU	Hippopotamus	<i>Hippopotamus amphibius</i>	1.2.0					0.1.0	1.1.0
	LC	Giraffe	<i>Giraffa camelopardalis</i>	2.2.0						2.2.0
	EN	Baringo/Rothschild giraffe	<i>Giraffa camelopardalis rothschildi</i>	1.3.0	0.1.0	2.0.0			0.1.0	3.3.0
	EN	Okapi	<i>Okapia johnstoni</i>	1.0.0	1.0.0					2.0.0
	NT	Blackbuck	<i>Antilope cervicapra</i>	1.5.0				0.1.0		1.4.0
	CR	Eastern bongo	<i>Tragelaphus eurycerus isaaci</i>	1.3.0						1.3.0
	EW	Scimitar-horned oryx	<i>Oryx dammah</i>	1.3.0		1.0.0	1.0.0			1.3.0
		DOMESTIC								
		Rabbit	<i>Oryctolagus cuniculus domestic</i>	1.0.0					1.0.0	1.0.0
		Flemmish Giant rabbit	<i>Oryctolagus cuniculus domestic flemish_giant</i>	2.0.0				1.0.0		1.0.0
		Tamworth pig	<i>Sus scrofa scrofa tamworth</i>	1.1.0						1.1.0
		Friesian cow	<i>Bos taurus taurus british_friesian</i>	0.2.0	0.3.0				0.4.0	0.1.0
		Simmental cow	<i>Bos taurus taurus simmental</i>	0.1.0						0.1.0
		Small East African goat	<i>Capra hircus hircus small_east_african</i>	1.5.0		0.1.0			1.0.0	1.0.0
		Texel x Suffolk sheep	<i>Ovis aries aries texel x suffolk</i>	0.2.0	2.2.0				0.2.0	2.2.0
		Labrador dog	<i>Canis lupus familiaris labrador</i>	0.1.0						0.1.0
		CLASS: BIRDS	AVES							
	LC	OSTRICHES Ostrich	STRUTHIONIFORMES <i>Struthio camelus</i>	1.7.0						1.7.0
	VU	PENGUINS Humboldt penguin	SPHENISCIFORMES <i>Spheniscus humboldti</i>	7.6.3						7.6.3
	LC	HERONS/STORKS Little egret	CICONIIFORMES <i>Egretta garzetta</i>	2.0.0						2.0.0
	CR	Waldrapp ibis	<i>Geronticus eremita</i>	9.13.0		1.0.1				10.13.1
	NT	FLAMINGOS Chilean flamingo	PHOENICOPTERIDAE <i>Phoenicopterus chilensis</i>	40.35.0		2.1.16	0.0.6	1.3.1		41.33.9
	LC	GALLINACEOUS BIRDS Helmeted guinea fowl	GALLIFORMES <i>Numida meleagris</i>	0.0.0	0.0.8					0.0.8
	LC	Common peafowl	<i>Pavo cristatus</i>	2.3.0		0.0.1	0.0.1			2.3.0
	NT	Crested wood partridge	<i>Rollulus rouloul</i>	6.5.0				2.2.0		4.3.0
	LC	Red junglefowl	<i>Gallus gallus</i>	1.0.0						1.0.0

	IUCN Status	SPECIES		Total at 01.01.14	Arrivals	Births	Dead within 30 Days	Dead	Departed	Total at 01.01.15
		PIGEONS/DOVES	COLUMBIFORMES							
	NT	Nicobar pigeon	<i>Caloenas nicobarica nicobarica</i>	1.1.0						1.1.0
	EN	Mauritius Pink pigeon	<i>Columba mayeri</i>	1.1.0					0.1.0	1.0.0
	LC	Green imperial pigeon	<i>Ducula aenea aenea</i>	0.1.0						0.1.0
	LC	Pied imperial pigeon	<i>Ducula bicolor</i>	2.1.3		0.0.3	0.0.1			2.1.5
ESB	NT	Victoria crowned pigeon	<i>Goura victoria</i>	4.1.0				1.0.0		3.1.0
		PARROTS	PSITTACIFORMES							
	LC	Scarlet macaw	<i>Ara macao</i>	1.0.0						1.0.0
	VU	Military macaw	<i>Ara militaris</i>	1.1.0						1.1.0
ESB	VU	Mexican military macaw	<i>Ara militaris mexicana</i>	5.2.0						5.2.0
		TURACOS/CUCKOOS	CUCULIFORMES							
ESB	LC	Red-crested turaco	<i>Tauraco erythrolophus</i>	1.1.0				0.1.0		1.0.0
		HORNBILLS ETC.	CORACIIFORMES							
	NT	Great hornbill	<i>Buceros bicornis</i>	1.1.0						1.1.0
ESB	LC	Abyssinian ground hornbill	<i>Bucorvus abyssinicus</i>	1.1.0						1.1.0
		PERCHING BIRDS	PASSERIFORMES							
	LC	Black-throated laughing thrush	<i>Dryonastes chinensis</i>	0.1.0						0.1.0
		DUCKS	ANSERIFORMES							
	LC	Mandarin duck	<i>Aix galericulata</i>	1.1.0					1.1.0	0.0.0
	LC	Wood duck	<i>Aix sponsa</i>	2.0.0					2.0.0	0.0.0
		DOMESTIC FOWL								
		Australorp chicken	<i>Gallus gallus domestic australorp</i>	9.3.0	1.0.0				8.0.0	2.3.0
		Sussex chicken (light)	<i>Gallus gallus domestic sussex light</i>	6.6.0	0.3.0	8.6.1	0.0.1	0.2.0	5.10.0	9.3.0
		Brahma bantem	<i>Gallus gallus domestic brahma</i>	1.5.0					1.1.0	0.4.0
		Rhode Island red chicken	<i>Gallus gallus domestic rhode_island_red</i>	0.0.0	0.2.0					0.2.0
		Call duck	<i>Anas platyrhynchos domestic call</i>	2.0.0				2.0.0		0.0.0
		Indian runner duck	<i>Anas platyrhynchos domestic indian_runner</i>	1.0.0						1.0.0
		CLASS: REPTILES	REPTILIA							
		CHELONES	TESTUDINES							
	CR	Annam leaf turtle	<i>Mauremys annamensis</i>	2.1.0						2.1.0
	NE	Central America wood turtle	<i>Rhinoclemmys pulcherrima manni</i>	0.2.0						0.2.0
	LC	Yellow-bellied slider	<i>Trachemys scripta scripta</i>	0.1.2	0.0.1	0.0.2	0.0.2	0.1.0		0.0.3
	LC	Red-eared slider	<i>Trachemys scripta elegans</i>	0.0.17	0.0.2			0.0.5		0.0.14
	NE	Red-footed tortoise	<i>Chelonoidis carbonaria</i>	1.4.0						1.4.0
	LC	Star tortoise	<i>Geochelone elegans</i>	2.4.0				0.1.0		2.3.0
	VU	African spurred tortoise	<i>Geochelone sulcata</i>	3.1.0				1.0.0		2.1.0
		CROCODILES	CROCODILIA							
	NE	West African Crocodile	<i>Crocodylus suchus</i>	0.2.0						0.2.0

IUCN Status	SPECIES		Total at 01.01.14	Arrivals	Births	Dead within 30 Days	Dead	Departed	Total at 01.01.15
	LIZARDS	SAURIA							
NE	Bornean bloodsuckers	<i>Bronchocela cristatella</i>	0.0.0	12.6.0			0.2.0		12.4.0
NE	Forest dragon	<i>Hypsilurus nigrigularis</i>	2.0.0						2.0.0
	Asian water dragon	<i>Physignathus cocincinus</i>	0.0.0	1.1.0					1.1.0
LC	Veiled chameleon	<i>Chamaeleo calyptratus</i>	1.0.0	1.0.0			1.0.0		1.0.0
	Green iguana	<i>Iguana iguana</i>	1.0.0				1.0.0		0.0.0
	Gecko (unk sp)	<i>Gekkonidae</i>	0.0.0	0.0.1			0.0.1		0.0.0
LC	Leopard gecko	<i>Eublepharis macularius</i>	0.2.0						0.2.0
NE	Tokay gecko	<i>Gekko gecko</i>	1.0.0						1.0.0
LC	Mangrove monitor	<i>Varanus indicus</i>	0.1.0						0.1.0
	SNAKES	SERPENTES							
LC	Green tree python	<i>Morelia viridis</i>	1.0.0						1.0.0
VU	Burmese rock python	<i>Python molurus bivittatus</i>	2.0.0						2.0.0
LC	Royal python	<i>Python regius</i>	0.0.4				0.0.1		0.0.3
NE	King ratsnake	<i>Elaphe carinata</i>	1.2.0		0.0.3			0.0.3	1.2.0
LC	Cornsnake	<i>Elaphe guttata guttata</i>	2.1.0						2.1.0
LC	Common gartersnake	<i>Thamnophis sirtalis</i>	1.0.0						1.0.0
	CLASS: AMPHIBIANS	AMPHIBIA							
	FROGS/TOADS	ANURA							
LC	Asiatic black-spined toad	<i>Bufo melanostictus</i>	0.0.1				0.0.1		0.0.0
	INVERTEBRATES	INVERTEBRATA							
	CLASS: ARACHNIDS	ARACHNIDA							
	SPIDERS	ARANEAE							
NE	Chilean rose tarantula	<i>Grammostola rosea</i>	0.3.0				0.0.1		0.2.0
	CLASS: INSECTS	INSECTA							
	STICK INSECTS	PHASMATOPTERA							
NE	Spiny/Thorny stick insect	<i>Trachyaretaon brueckneri</i>	5.0.0		x	x	x	0.6.0	1.4.0
NE	Indian green stick insects	<i>Cacauius morosus</i>	0.30*0		x	x	x	0.6.0	0.30*0
NE	Giant green stick insect	<i>Diapherodes gigantea</i>	0.0.5				0.0.5		0.0.0
NE	Magnus stick insect	<i>Phoebaticus magnus</i>	0.0.30		x		x		0.1.0
NE	Goliath Stick Insect	<i>Eurycnema goliath</i>	0.0.1				0.0.1		0.0.0
NE	Macleays spectre	<i>Extatosoma tiaratum</i>	0.0.1		x	x	x		0.0.7
NE	Black beauty stick insect	<i>Peruphasma schultei</i>	0.0.35*		x	x	x	0.0.3	1.8.2
NE	Zompro's/Thai stick insect	<i>Parapachymorpha zomproi</i>	1.3.0		x	x	x		0.0.7

* approximate numbers
x numbers not recorded



FOTA WILDLIFE PARK: DIRECTOR'S REPORT

Introduction:

Fota Wildlife Park had its most successful year since opening in 1983 despite the torrential storms that devastated Ireland for the first three months of 2014. Although the Wildlife Park experienced no structural damage to buildings from the high winds, eighteen large trees were blown down. However these trees provided great environmental enrichment items for the new animal habitats in the Asian Sanctuary. This inclement weather also had a detrimental effect on the attendance figures during the first quarter of the year with visitor numbers down 30% at the start of April compared to the previous year. However with winter over the weather changed and the Wildlife Park experienced one of the warmest and driest spring / summer on record. This good weather coupled with the opening of a number of new capital developments resulted in Fota's highest summer attendances ever which were 26% above the previous best summer performance.

The following is a summary of the main attendance indicators during the year 2014:

- Total visitor numbers for the year 2014 were 438,114 up 20% on 2013.
- Full rate paying visitors are 21% up compared to 2013.
- Membership sales in 2014 were 1% up for Park memberships but up 27% for Conservation memberships when compared to 2013 levels.
- Member's visits in 2014 were up 9% for Park and 29% up for Conservation member visits in comparison to 2013 figures.
- Gift Shop sales are up 6% compared to 2013.

- Total Park revenue in 2014 was up 16% on 2013.
- The Wildlife Park produced a surplus of €616,952 for the year 2014, which is an increase of 85% on the 2013 surplus figure of €333,531.



Animal Husbandry:

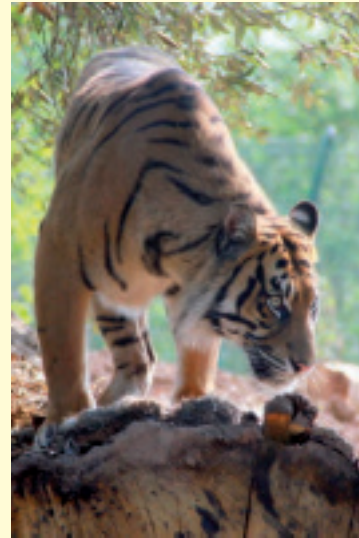
The most important development within the animal collection was the release into the wild at Vân tori-Neam Nature Park on 23rd April 2014 of two female European bison, *Bison bonasus* which were born at Fota. Vân tori-Neam Nature Park is located in the vast Carpathian Mountain range that spans across six countries including Romania, Hungary and the Czech Republic. The two Fota female bison were joined by four other female bison from the Highland Wildlife Park and Port Lymgne to form a small herd for release into the wild at the Vân tori-Neam Nature Park, Romania. The released bison were monitored using radio-collars and joined another herd of European bison, who were introduced into the park from zoo managed populations in Germany, Sweden and Switzerland.

European bison were hunted to extinction in the wild, with the last wild animals shot in the Białowie a Forest (on the Poland-Belarus border) in 1919 and in the North-

Western Caucasus in 1927. Reintroduction efforts have returned European bison to the wild with herds now found in Poland, Lithuania, Belarus, Russian Federation, Ukraine, and Slovakia. In April 2008 Fota Wildlife Park sent its first European bison back to the wild into Białowie a National Park in Poland where there are now descendants of Fota born European bison roaming through the Białowie a Forest in Poland. A male European bison arrived to Fota from Port Lympne in March as part of the EEP recommended transfers and will be the new breeding bull at Fota.

There were considerable changes within the Rothschild giraffe herd in 2014 with three calves born during the year. One of these births was notable as the female Rothschild giraffe 'Aoife' gave birth to a female calf in mid-June but on inspection the calf had a broken lower leg. However our veterinarian, Pat O 'Doherty managed to put a cast on the broken leg and with the expert care provided by our wardens the giraffe calf made a full recovery. This giraffe calf spent eight weeks with its leg in plaster but soon joined the rest of the giraffe herd running around the main paddock. In mid-April Fota also exchanged a female giraffe with Dublin Zoo in order to prevent inbreeding of the giraffes in Dublin Zoo.

A pair of Sumatran tigers arrived to Fota Wildlife Park in mid-March 2014 but had to complete six weeks isolation in the new Animal Care and Conservation Centre as part of their import regulations.. The female, Dourga, was born in Parc Zoologique de Champrépus Normandy, France but had spent a year in Parc des Félines, Nesles, France, before Fota could complete the Sumatran Tiger Forest habitat. The male, Deenar, came from Warsaw Zoo, Poland, where he was born in 2012. The two Sumatran tigers were moved to their new habitat on the 30th May 2014 just in time for



the June bank holiday weekend when over 14,000 people came to see them in their new exhibit over a this three day period. The male was a much more reclusive and timid character on his arrival compared to the female but has slowly adjusted to his new surroundings and has become more active and interested in his new enclosure.

The following are the more significant births and hatchings during 2014: an Agile gibbon, a female Columbian spider monkey (did not survive), 4 European bison, a female Brazilian tapir (stillborn), 2 Red pandas (one did not survive), 4 European eider ducks, 2 Coscoroba swans, 2 Cereopsis geese, 3 Blue and gold macaws, 16 Corncrakes and 5 Humboldt penguins. An adult male Humboldt penguin was found dead in its enclosure on 17th March. However he was 34 years old and just 3 years off the longevity record for any species of penguin in captivity.

The Corncrakes bred again in 2014 and this has been useful for the continued development of our husbandry capacity with this species in Fota. Some of the eggs were left under a corncrake hen to incubate and hatch and the hen successfully reared 3 of the chicks on her own. It is hoped to collect some eggs from the wild in 2016 under the guidance of the National Parks and Wildlife Service. Two Red panda cubs were born on 13th June to female

Bonnie but unfortunately one of the cubs was found dead outside the den two days later. The remaining cub progressed well and this was the first cub successfully reared by the female 'Bonnie'.

In June three female Visayan spotted deer arrived from Decin Zoo in the Czech Republic and were put into isolation in their new Visayan Forest Habitat in the Asian Sanctuary. They were later joined in this habitat by the pair of Visayan warty pigs who already spent a year in the Wildlife Park having arrived in mid-2013.

Capital Developments Animal Care and Conservation Centre (ACCC):

Construction of the Animal Care and Conservation Centre commenced at the end of February 2013 after contract signing with SECAD to provide €200,000 in funding for its construction. Work on the main structure was completed in mid-September 2013 with a total floor area of 630m² consisting of the following main structures;

- Veterinary Care Building(180m²)
- Tropical House (280m²) to house numerous tropical plants, reptiles, amphibians, fish and butterflies (approx. 40 new animal species to Fota)
- Incubation/Rearing unit with an off-show breeding unit. (150m²).



The Veterinary Care section consists of an entrance lobby, office, and toilet with shower, examination–prep room, operating theatre with secure drugs storage unit and an animal holding-recovery area. The animal holding area includes two large outdoor pens that are capable of housing large carnivores such as tigers. These pens will enable Fota to isolate and hold the two Sumatran tigers when they arrive in March 2015. There are also two small animal (monkey) indoor pens with connecting outdoors pens and 3 indoor bird pens and a food kitchen.

The entire ACCC complex is heated by a hydrothermal heat exchange system using water from the main lake which is pumped into a large tank at



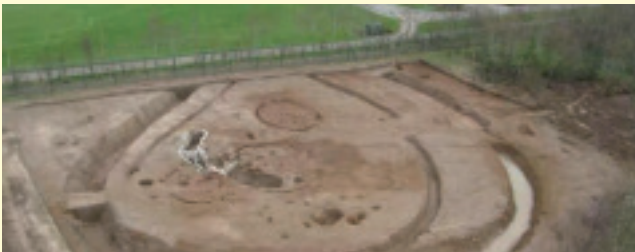
the back of the waterfall in the penguin enclosure. Heat is extracted from the water in this tank and then the cooled water flows down through the waterfall into the penguin pond thus cooling the penguin pond. This system heated the tropical house to 27°C and during this past winter and other fuel source was used to heat this entire complex.

The Tropical House opened to the public on 14th February 2014 with the following number of new species on public display: 7 reptile, 9 amphibian, 32 fish, and 14 butterfly species amongst 300 tropical plants. Four fish tanks demonstrate the ecology of a stream from mountain to deep sea and feature the following; a fresh water habitat, a brackish water habitat, a healthy coral reef and a lower reef with predatory fish. Tropical butterflies roam free-range throughout the house and amongst the public pathways. The back of the house has planted a wildflower

garden with native flora for butterflies and two ponds are planned for 2015 for native frogs and newts.

The Animal Care and Conservation Centre including its Tropical House section was officially opened by Minister of Transport, Tourism and Sport Dr. Leo Varadkar on the 20th June 2014.

THE ASIAN SANCTUARY DEVELOPMENT: Phase 1: The Asian Forests.



On the 15th October 2013 Fota Wildlife Park received planning permission for the revised 'Asian Sanctuary Development' to be completed in a number of phases. However a number of conditions were stipulated in the planning permission including one that dealt with an archaeology find (shown here) which was unearthed during the Environmental Impact Assessment. An archaeology dig commenced during the second week of December 2013 and it took 11 weeks to complete in



some of the worst storms the Wildlife Park experienced. The aerial photograph opposite of the site demonstrates the size and shape of the compound or enclosure and the Souterrain surrounded by rocks on the left hand side. A geophysical survey

of the nearby Fulacht Fiadh successfully identified the location of the underground burnt spreads and it was then possible to complete the full outline of the archaeological site. When this full outline of the archaeological site was resolved it was then possible to begin Phase 1 of the Asian Sanctuary with the construction of the nearby Sumatran tiger habitat.

MMD Construction Ltd commenced Phase 1 of the new Asian Sanctuary, The Asian Forests, in late January during the height of the storms that raged through Ireland. The first project completed under development of Asian Forests was the Sumatran tiger habitat which was finished just before the 2014 June bank holiday weekend. The opening of this exhibit drew fantastic crowds with over 14,000 people visiting over the 3 days of the bank holiday weekend.

Main elements of Phase One of Asian Sanctuary, The Asian Forests.

Tiger house and habitat including the lime kiln restoration. Completed 30th May 2014.

Visayan warty pig and Visayan spotted deer habitat. Completed 1st Sept. 2014.

Lion-tailed macaque house and habitat. Completed 14th Nov 2014.

Construction and lining of the main lake. Completed 17th July 2014.

Two primate islands including night houses. Completed 17th Nov 2014.

All site preparation, drainage, main roads and paths, water mains and site services and landscaping relating to Phase 1. Completed 14th Nov 2014.

Asian Sanctuary Phase 2A:



As part of the bill of quantities and pricing of Phase 1 of the Asian Sanctuary certain elements of Phase 2 were included in these estimates but were not included in the contract with MMD in Phase 1. However these tender rates that applied to the reduced scope of the bill of quantities in the MMD contract also applied to the elements of Phase 2 that we had included in the original tender process (Phase 2A). The main reason for getting these heavy structural works items completed in 2014 was to have them finished during a drier part of the year as the area of work was located in the wettest part of the Asian Sanctuary. The main items of Phase 2A are listed in the table below with their completion dates. Lake No 2 was completed in 2014 along with the associated Raised Walkway which affords fantastic views over the lakes and the surrounding animal habitats (see photo opposite). The two road bridges around the lakes have been constructed but the railing on bridge no. 2 will be completed in early 2015. The associated landscaping around the lakes and bridges were not completed in 2014 but will be finished when weather conditions permit in the 2015. A well was discovered at the eastern side of Lake 2 and sump and manhole have been installed so that this water source can be utilized in the future.

Asian Sanctuary Phase 2A. Infra structural Developments main items.

Diversion of Fota House water mains outside the area of construction. Completed in Nov. 2014

Development of Lake 2 with an island and adjacent swamp area. Completed in Nov 2014.

Raised walkway over Lake 2 and swamp area. Completed in December 2014.

Provision of Site Service road to east of Phase 2 site around Completed archaeology to allow construction of phase 2. Includes adjustment of boundary gate for future entrance gate. Completed Jan 2015

Reed bed filtration area as recommend in planning permission. Completed Nov 2014 but will be planted in 2015

Pump house and water pipes connect existing lakes to allow circulation and flow of saline water through new lakes one and two. Completed Feb 2015

Completion of 2 road bridges around Lake 1. The railings on Bridge No 2 were completed in Feb 2015.

The Rhino barriers in the lake 2 and the adjacent rhino paddocks will not be completed until June 2015 due to the wet weather conditions over winter.

Education 2014 Review:

In excess of 13,400 students participated in a variety of formal educational modules in Fota Wildlife Park during the 2014 season. This figure represents a 14 % increase on the previous academic year. Both the practical field ecology module and the recently introduced team building module continued to increase in popularity among the secondary school sector. Likewise, the primary conservation module has witnessed a steady increase in attendance figures when compared to 2013. Throughout 2014, Fota's education team hosted a number of public events in the Wildlife Park including the following;

- Mad Scientist Weekend
- Green Weekend – promoting environmental awareness
- Native Species Weekend
- Animal Welfare Weekend

The team also participated in a variety of exhibitions including the popular “Discovery 2014” event which is a platform for the promotion of STEM organisations / institutions on a national scale. In November of 2014, Fota Wildlife Park hosted the Annual BIAZA ACE conference which attracted in excess of 100 delegates. The conference was instrumental in forming closer ties with our colleagues in a number of institutions throughout the UK and also facilitated the exchange of ideas and information relevant to our primary objectives. Collaborative projects with both Cork County Council and Forfas were enhanced during 2014. Cork County Council contracted Fota's Education Department to provide a series of Biodiversity outreach programmes to schools throughout Cork City and County during the autumn of 2014.

Marketing Campaign 2014 Review:

The 2014 marketing campaign was a great success and it exceeded all the targets that were included in the 12 month plan. The following predictions were made in the 2014 Marketing plan:

- Increasing visitor numbers by 10%
- Increasing membership by 10%
- Increasing school visits by 10%



However the at the end of 2014 visitors numbers rose to 438,000, which is an increase of 20% on 2013 levels. This increase was spread across full rate paying visitors, schools visits, member visits and also corporate/hotel packages which grew by a staggering 39%.

The campaign also achieved key points during the year including:

- Positioned Fota Wildlife Park as a ‘Must See’ attraction in the 1.5hr drive of the park.
- Promoted The Tropical House as part of the Animal Care & Conservation building
- Promoted The Tiger Forest as part of phase 1 of the Asian Sanctuary development
- Continued to highlight the Park's conservation, education and research projects, partnering with similar organisations to gain further credibility for the Park's work.

The park managed to achieve these points at various stages throughout the year via PR, Advertising, Online, Branding and networking.

- During the year there was a lot of focus on building a community that has an interest in the park through enhanced communication with the public via Social Media where the park's Facebook following went from 40,000 to 100,000 in less than 12 months. This was backed up by an increase in twitter followers by 35% and 21% in members who received a more detailed magazine outlining our plans and conservation efforts on 2 occasions during 2014.
- Traditional PR also had a huge impact on communicating key points to the public with increased coverage across all media in Ireland at key points throughout the year and all done in house. During the year the park had an official launch for the Tropical House and a press preview of the Tiger Forest.
- The website continued to grow in 2014 acting as the main home to all the parks communication. This has resulted in the park growing its online traffic by 24% on the previous year with visits to Fotawildlife.ie going from 270,000 in 2013 to 346,000 in 2014.
- On top of the online presence the park also increased its' branding especially amongst locals and visitors to the Cork region through two very strong campaigns across print, radio, outdoor, online and cinema. The adverts focussed on what was new at the park in 2014 i.e. the Tropical House and the Tigers.



Meetings

In 2013 the Director, Sean Mc Keown, with Tony O'Dwyer (Operations Manager) and John McLaughlin (Asst. Head Warden), attended the EAZA annual conference in Budapest. Sean Mc Keown attended the Mid-year EAZA Council meeting in Doue La Fontaine, France as the Irish Zoos EAZA Council representative. Sean Mc Keown attended the BIAZA Annual Conference in Yorkshire Wildlife Park and was appointed Vice Chairman of BIAZA.

The BIAZA Annual ACE Conference was hosted by Fota Wildlife in November 2014

RESEARCH AND CONTRIBUTION TO FIELD CONSERVATION PROJECTS

Conservation Research

Throughout the year, Fota Wildlife Park continued its long term collaboration with the School of Biological, Earth and Environmental Sciences (BEES), University College Cork, in the fields of animal behaviour, environmental enrichment, population biology and ecology. The following list of research projects were carried out by students under the supervision of Dr. Ruth Ramsey.

Fourth Year Undergraduate Projects:

Adam Ansbro: - A study of the behaviour of the ring-tailed lemur (*Lemur catta*) at Fota Wildlife Park.

Eoin Clarke: - A behavioural study of captive primates and Meerkats, and their interactions in mixed species exhibits

Cillian O'Connell: - The foraging and behaviour of the red squirrel (*Sciurus vulgaris*) at Fota Wildlife Park.



Rebecca Prangnell: - The behaviour of captive Rothschild giraffes, scimitar-horned oryx and European bison and their environmental enrichment at Fota Wildlife Park.

Michael O'Sullivan:- Visitor effects on the habitat use of the Eurasian red squirrel *Sciurus vulgaris* in Fota Wildlife Park.

Brian Walsh: - Responses of red squirrels (*Sciurus vulgaris*) at Fota Wildlife Park to the alarm calls of a sympatric species.

Post Graduate Project:

MSc Student Project:

Ashley Markewinski: The behaviour and environmental enrichment of selected captive vertebrates at Fota Wildlife Park.

PhD Project:

Courtney Keane: - The potential effect of zoo-based education programmes on children's learning.

Rebecca Newman: - The influence of wild and captive environments on populations of Lion-tailed Macaques, *Macaca silenus*; behavioural responses to changes in population dynamics and different environments and the influence of diet on health and behaviour. This PhD is co-funded by Irish Research Council and Fota Wildlife Park and commenced in November 2014.

In 2012 Thomas Quirke completed his PhD thesis entitled 'Cheetahs in Captivity: A study on behaviour and the effects of environmental enrichment'. The following is the complete list of papers relating to this PhD which have been published in scientific journals during the

period 2011 to 2014. This PhD was co-funded by the Irish Research Council and Fota Wildlife Park.

Quirke T., & O'Riordan R. (2014) An investigation into the prevalence of exploratory behaviour in captive cheetahs, (*Acinonyx jubatus*) *Zoo Biology*. 9999:1-9

Quirke O.R.T and Davenport J. (2013) A comparative study of the speeds attained by captive cheetahs during the enrichment practice of the 'cheetah run'. *Zoo Biology* 32. 490-496

Quirke T., O'Riordan R. M., & Zuur A. (2012) Factors influencing the prevalence of stereotypical behaviour in captive cheetahs (*Acinonyx jubatus*) *Applied Animal Behaviour Science* 12/2012; 142(s 3-4):189-197. · 1.63

Quirke T., & O'Riordan R. M. (2011) The effect of a randomised enrichment treatment schedule on the behaviour of cheetahs (*Acinonyx jubatus*) *Applied Animal Behaviour Science* 11/2011; · 1.63

Quirke T., & O' Riordan R. M. (2011) The effect of different types of enrichment on the behaviour of cheetahs (*Acinonyx jubatus*) in captivity *Applied Animal Behaviour Science* 08/2011; 133(1):87-94. · 1.6

Post Doctorate Projects:

Dr. Amy Haigh started (Oct. 1st 2012) her EMBARK partnership post doctorate project with Fota Wildlife Park on 'Population dynamics, habitat use, philopatry and feeding behaviour of the red squirrel in Fota'. This research project is supervised by Dr. Fidelma Butler of UCC and is co-funded by the Irish Research Council with

Fota Wildlife Park being the Enterprise Partner. Dr. Amy Haigh has completed two draft papers on Red squirrel ecology, one looking at tree preferences and another on behaviour, genetics and home range. These papers will be presented at the following conferences; The 9th International Conference on Behaviour, Physiology and Genetics of Wildlife, in Berlin and The XV Congress of the International Society for Behavioural Ecology, New York.

Publication:

Fota Wildlife Park hosted two workshops on the postglacial colonization of Ireland which resulted in the publication of 'Mind the Gap II: new insights into the Irish postglacial' Sleeman, D.P., Carlsson, J. and Carlsson, J.E.L. (eds) 2014. This volume is a contribution resulting from informal, multidisciplinary meetings held at Fota Wildlife Park in both 2012 and 2013. This volume contains a total of eleven papers, each of which brings a fresh perspective to particular aspects of postglacial colonization studies. The associated contributions from this volume will further enhance the understanding of natural history of the island of Ireland and stimulate further research in this important area of our natural heritage. The series of meetings and associated publication were funded by Fota Wildlife Park.

Field Conservation Projects

Fota Wildlife Park continued to make direct funding available to conservation programmes that have a direct conservation benefit to both indigenous and exotic species. Conservation of the critically endangered Madagascar pochard is the most extensive conservation project which Fota has been involved with in recent years. Within the last 4 years, the project has witnessed significant progress in efforts to save this critically

endangered species, whose wild population was reduced to 21 birds in May of 2012.

The intensification of conservation efforts and associated site protection has led to a significant increase in population size as confirmed by a monthly count undertaken on 16th December 2014. The attained data confirmed an increase of wild Madagascar Pochard to a total of 25 individuals at three study sites including Matsaborimena, Andriakanala and Matsaborimaitso. The most welcoming development was the sighting of three ducklings and three juveniles on Matsaborimena Lake. The captive population also continues to grow to a total of 54 captive Madagascar pochard (29 males and 25 females), which is an increase of 12 birds from the previous year. Our commitment to the Madagascar Pochard conservation and breeding project continued during 2014 with financial contributions towards the running costs of the Madagascar Pochard Captive Breeding Centre. This project is run in conjunction with the Durrell Wildlife Conservation Trust and the Wildfowl and Wetlands Trust.

Fota Wildlife Park continues its collaboration with Fauna & Flora International to fund the training, equipment and salaries of two Community Patrol Teams to protect the critically Endangered Western Black Crested Gibbon and Tonkin snub-nosed monkey (CPT) in Mun Cang Chai and Quan Ba District respectively in Vietnam. Work on these two protected areas has already commenced whereby both habitat loss/degradation and poaching continue to threaten the survival of these primates.

Fota Wildlife Park has actively supported in-situ conservation for the Sumatran Tiger since January of 2014 through 21st Century Tiger's work in the Kerinci Seblat National Park. The Kerinci Seblat Tiger Protection Project



was initially launched in May of 2000 and is an on-going collaborative project between Kerinci Seblat National Park (KSNP) and Fauna & Flora International (FFI) and 21st Century Tiger. Kerinci Seblat National Park is the second-largest national park in Southeast Asia, covering approximately 1.35 million hectares excluding buffer zone forests. The Park is critical habitat for the endangered Sumatran tiger. The program is committed to maintaining a sustainable and effective species conservation program in one of Asia's most important national parks and this is achieved by:

- Supporting the Indonesian Government's commitment regarding protection of threatened species, in particular the critically endangered Sumatran tiger
- Carrying out intelligence investigations to identify possible threats, thus ensuring that an appropriate response can be formulated.
- Patrolling key areas to prevent or remove threats and to establish a national park presence in the forest.
- Encouraging intervention to mitigate the effects of human-tiger conflict for protection of both the community and Sumatran tiger
- Ensuring law enforcement to address wildlife and other forest crime and support the legal process.

The following native species programmes were funded and supporting during 2014:

- IWT Cork Frog Survey: This survey examined the distribution and health of the common frog, *Rana temporaria*, in county Cork
- Barn Owl Survey in conjunction with BirdWatch Ireland facilitating the monitoring of nesting sites continued for another year.
- Setup costs for a trial Corncrake Captive Breeding Project in Fota and capacity building with staff.
- IWT Ladybird survey to investigate the distribution of Harlequin ladybirds in Ireland.

Fota 2014 Animal Inventory

	IUCN STATUS	TAXONOMIC	COMMON NAME	Beginning	Births	Acquisitions	Deaths	Dispositions	Ending
		VERTEBRATA	VERTEBRATES						
		CLASS: PISCES	CLASS: FISH						
	EW	<i>Ameba splendens</i> *	Butterfly splitfin	0.0.110	0.0.0	0.0.0	0.0.0	0.0.0	0.0.110
	EW	<i>Skiffia francesae</i> *	Golden sawfin	0.0.100	0.0.0	0.0.0	0.0.0	0.0.0	0.0.100
		CLASS: AMPHIBIA	CLASS: AMPHIBIANS						
	CR	<i>Ambystoma mexicanum</i> *	Axolotl	7.6.0	0.0.0	0.0.1	0.0.1	0.0.0	4.3.0
	CR	<i>Neurergus kaiseri</i> *	Emperor spotted newt	0.0.10	0.0.0	0.0.0	0.0.0	0.0.0	0.0.9
	EN	<i>Epipedobates tricolor</i> *	Phantasmal poison dart frog	0.0.10	0.0.0	0.0.0	0.0.0	0.0.0	0.0.10
	LC	<i>Trachycephalus venulosus</i>	Veined tree frog	0.0.1	0.0.0	0.0.0	0.0.0	0.0.0	0.0.1
	LC	<i>Agalychnis callidryas</i> *	Red-eyed tree frog	0.0.10	0.0.0	0.0.0	0.0.0	0.0.0	0.0.10
	CR	<i>Agalychnis moreletii</i>	Morelet's tree frog	3.1.1	0.0.0	0.0.0	3.1.0	0.0.0	0.0.1
	LC	<i>Phyllomedusa bicolor</i> *	Giant waxy tree frog	0.0.1	0.0.0	0.0.0	0.0.1	0.0.0	0.0.0
ESB	CR	<i>Leptodactylus fallax</i>	Mountain chicken frog	4.5.1	0.0.0	0.0.0	1.0.0	0.0.0	3.5.1
	CR	<i>Mantella aurantiaca</i> *	Golden mantella	0.0.10	0.0.0	0.0.0	0.0.0	0.0.0	0.0.10
	EN	<i>Mantella viridis</i> *	Green mantella	0.0.10	0.0.0	0.0.0	0.0.0	0.0.0	0.0.10
	LC	<i>Polypedates otitophus</i> *	Bornean eared frog	0.0.10	0.0.0	0.0.0	0.0.1	0.0.0	0.0.9
		<i>Theلودerma corticale</i>	Tonkin bug-eyed frog	0.0.10	0.0.0	0.0.0	0.0.0	0.0.0	0.0.10
		CLASS: REPTILIA	CLASS: REPTILES						
		<i>Chelonoidis carbonaria</i>	Red-footed tortoise	1.0.0	0.0.0	0.0.0	0.0.0	0.0.0	1.0.0
	EN	<i>Indotestudo elongata</i>	Elongated tortoise	1.3.0	0.0.1	0.0.0	0.0.0	0.0.0	1.3.1
	LC	<i>Chamaeleo calypratus</i>	Veiled chameleon	0.0.0	0.0.0	1.2.0	1.1.0	0.0.0	0.1.0
		<i>Ctenonotus</i>	Iguana	0.0.0	0.0.0	2.1.0	0.0.0	0.0.0	2.1.0
	LC	<i>Phelsuma madagascariensis</i>	Madagascar giant day gecko	0.0.0	0.0.0	0.0.1	0.0.0	0.0.0	0.0.1
	LC	<i>Acrantophis dumerili</i>	Dumeril's ground boa	3.0.0	0.0.0	0.0.0	0.0.0	0.0.0	3.0.0
EEP	VU	<i>Epicrates subflavus</i>	Jamaican boa	1.0.0	0.0.0	0.0.0	1.0.0	0.0.0	0.0.0
	LC	<i>Python regius</i> *	Royal/ball python	0.0.2	0.0.0	0.0.0	0.0.0	0.0.0	0.0.2
		CLASS: AVES	CLASS: BIRDS						
	LC	<i>Struthio camelus</i>	Common ostrich	4.4.0	0.0.0	0.0.0	0.0.0	0.0.0	4.4.0
	LC	<i>Dromaius novaehollandiae</i>	Emu	1.1.0	0.0.0	0.0.0	0.0.0	0.0.0	1.1.0
	LC	<i>Numida meleagris</i>	Helmeted guineafowl	3.2.22	7.4.2	0.0.0	0.0.4	0.0.0	10.6.20
	LC	<i>Guttera pucherani</i>	Kenya crested guineafowl	0.0.1	0.0.0	0.0.0	0.0.1	0.0.0	0.0.0
	LC	<i>Pavo cristatus</i>	Common peafowl	4.9.0	0.0.0	0.0.0	0.0.0	0.0.0	4.9.0
	LC	<i>Anser anser</i>	Greylag goose	11.8.14	0.0.1	0.0.0	0.0.1	0.0.0	11.8.14
	LC	<i>Anser caerulescens</i>	Snow goose	1.8.10	0.0.0	0.0.0	0.2.3	0.0.0	1.6.7
	NT	<i>Anser canagicus</i>	Emperor goose	2.2.0	0.0.0	0.0.0	0.0.0	0.0.0	2.2.0
	VU	<i>Anser cygnoides</i>	Swan goose	2.3.0	0.0.0	0.0.0	1.1.0	0.0.0	1.2.0
	LC	<i>Anser indicus</i>	Bar-headed goose	8.7.9	0.0.0	0.0.0	0.0.1	0.0.0	8.7.8
	LC	<i>Branta leucopsis</i>	Barnacle goose	14.7.13	0.0.0	0.0.0	0.0.1	0.0.0	14.7.12
	VU	<i>Branta sandvicensis</i>	<i>Ne-ne</i>	3.1.1	0.0.0	0.0.0	0.0.0	0.0.0	3.1.1
	LC	<i>Cereopsis novaehollandiae</i>	Cereopsis goose	2.4.1	0.1.3	0.0.0	0.0.3	0.0.0	2.5.1
	LC	<i>Coscoroba coscoroba</i>	Coscoroba swan	1.4.0	1.1.0	0.0.0	0.0.0	0.0.0	2.5.0
	LC	<i>Cygnus atratus</i>	Black swan	0.1.1	0.0.0	0.0.0	0.0.0	0.0.0	0.1.1

	IUCN STATUS	TAXONOMIC	COMMON NAME	Beginning	Births	Acquisitions	Deaths	Dispositions	Ending
	LC	<i>Aix galericulata</i>	Mandarin duck	17.9.0	0.0.9	0.0.0	1.2.0	0.0.0	16.7.9
	LC	<i>Aix sponsa</i>	North American wood duck	7.2.4	0.0.0	0.0.0	1.0.0	0.0.0	6.2.4
	LC	<i>Aythya fuligula</i>	Tufted duck	4.3.11	0.0.0	0.0.0	0.0.0	0.0.0	4.3.11
	NT	<i>Aythya nyroca</i>	Common white-eye	2.1.2	0.0.0	0.0.0	0.0.0	0.0.0	2.1.2
	LC	<i>Netta rufina</i>	Red-crested pochard	9.8.0	0.0.0	0.0.0	0.1.0	0.0.0	9.7.0
	LC	<i>Somateria mollissima</i>	Eider	3.2.0	0.0.4	0.0.0	0.0.0	0.0.0	3.2.4
	LC	<i>Tadorna ferruginea</i>	Ruddy shelduck	1.0.8	0.0.0	0.0.0	0.0.3	0.0.0	1.0.5
EEP	VU	<i>Spheniscus humboldti</i>	Humboldt penguin	14.14.4	0.0.5	0.0.0	1.1.2	0.0.0	13.13.7
	NT	<i>Phoenicopterus chilensis</i>	Chilean flamingo	1.3.2	0.0.0	0.0.0	0.0.0	0.0.0	1.3.2
	LC	<i>Pelecanus onocrotalus</i>	Eastern white pelican	3.2.0	0.0.0	0.0.0	0.1.0	0.0.0	3.1.0
	LC	<i>Accipiter gentilis</i>	Northern goshawk	0.1.0	0.0.0	0.0.0	0.0.0	0.0.0	0.1.0
ESB	LC	<i>Haliaeetus albicilla</i>	White-tailed sea eagle	0.2.0	0.0.0	0.0.0	0.0.0	0.0.0	0.2.0
	LC	<i>Crex crex</i>	Corncrake	9.14.0	2.4.11	0.0.0	2.0.11	0.2.0	9.16.0
ESB	VU	<i>Goura scheepmakeri</i>	Scheepmaker's crowned pigeon	0.0.0	0.0.0	2.0.0	0.0.0	0.0.0	2.0.0
	LC	<i>Ara ararauna</i>	Blue-and-yellow macaw	4.1.0	0.2.1	1.0.0	0.0.1	0.0.0	5.3.0
	LC	<i>Ara chloroptera</i>	Green-winged macaw	1.0.0	0.0.0	1.0.0	0.0.0	0.0.0	2.0.0
	LC	<i>Ara macao</i>	Scarlet macaw	1.1.0	0.0.0	0.0.0	0.0.0	0.0.0	1.1.0
		CLASS: MAMMALIA	CLASS: MAMMALS						
		MARSUPIALIA	MARSUPIAL						
ESB	LC	<i>Macropus giganteus</i>	Eastern grey kangaroo	3.10.1	0.0.1	0.0.0	1.0.1	0.0.0	2.10.1
	LC	<i>Macropus rufogriseus</i> *	Red-necked wallaby	0.0.63	0.0.0	0.0.0	0.0.18	0.0.0	0.0.45
		PRIMATES	PRIMATES						
ESB	EN	<i>Lemur catta</i>	Ring-tailed lemur	4.8.0	0.0.0	0.0.0	0.0.0	0.0.0	4.8.0
EEP	CR	<i>Varecia rubra</i>	Red ruffed lemur	0.1.0	0.0.0	0.0.0	0.0.0	0.0.0	0.1.0
EEP	CR	<i>Varecia variegata</i>	Black-and-white ruffed lemur	2.0.0	0.0.0	0.0.0	0.0.0	0.0.0	2.0.0
EEP	LC	<i>Pithecia pithecia</i>	White-faced saki	3.5.0	0.0.0	0.0.0	0.0.0	0.0.0	3.5.0
ESB	LC	<i>Alouatta caraya</i>	Black howler	2.2.1	0.1.0	0.0.0	0.1.0	0.0.0	2.2.1
EEP	CR	<i>Ateles fusciceps</i>	Black-headed spider monkey	2.4.0	0.1.0	0.0.0	0.1.0	0.0.0	2.4.0
	LC	<i>Lophocebus albigena</i>	Grey-cheeked mangabey	1.5.0	0.0.0	0.0.0	0.0.0	0.0.0	1.5.0
EEP	EN	<i>Macaca silenus</i>	Lion-tailed macaque	10.12.0	0.0.0	0.0.0	0.0.0	0.0.0	10.12.0
ESB	LC	<i>Colobus guereza</i>	Eastern black-and-white colobus	5.0.0	0.0.0	0.0.0	0.0.0	0.0.0	5.0.0
EEP	EN	<i>Hylobates agilis</i>	Agile gibbon	1.2.0	0.0.1	0.0.0	0.0.0	0.0.0	1.2.1
EEP	EN	<i>Hylobates lar</i>	Lar gibbon	2.3.0	0.0.0	0.0.0	0.0.0	0.0.0	2.3.0
EEP	EN	<i>Symphalangus syndactylus</i>	Siamang	4.2.0	0.0.0	0.0.0	0.0.0	0.0.0	4.2.0
		RODENTIA	RODENTS						
	LC	<i>Cynomys ludovicianus</i>	Black-tailed prairie dog	2.3.0	0.0.0	0.0.0	0.0.0	0.0.0	2.3.0
	NT	<i>Dolichotis patagonum</i> *	Patagonian mara	0.0.24	0.0.1	0.0.0	0.0.3	0.0.0	0.0.22
	LC	<i>Hydrochaeris hydrochaeris</i>	Capybara	1.1.0	0.0.0	0.0.0	0.1.0	0.0.0	1.0.0

	IUCN STATUS	TAXONOMIC	COMMON NAME	Beginning	Births	Acquisitions	Deaths	Dispositions	Ending
		CARNIVORA	CARNIVORES						
EEP	VU	<i>Acinonyx jubatus</i>	Cheetah	6.5.0	0.0.0	0.0.0	0.0.0	0.0.0	6.5.0
EEP	CR	<i>Panthera tigris</i>	Tiger	0.0.0	0.0.0	1.1.0	0.0.0	0.0.0	1.1.0
	LC	<i>Suricata suricatta</i>	Slender-tailed meerkat	3.5.9	0.0.0	0.0.0	0.0.0	0.0.0	3.5.9
	LC	<i>Phoca</i>	Harbor seal	0.1.0	0.0.0	0.0.0	0.0.0	0.1.0	0.0.0
	LC	<i>Phoca vitulina</i>	Harbor seal	0.1.0	0.0.0	0.0.0	0.0.0	0.0.0	0.1.0
EEP	VU	<i>Ailurus fulgens</i>	Red panda	1.1.0	0.1.1	0.0.0	0.0.1	0.0.0	1.2.0
		PERISSODACTYLA	ODD-TOED UNGULATES						
	LC	<i>Equus burchellii</i>	Common zebra	3.3.0	0.0.0	0.0.0	0.0.0	0.0.0	3.3.0
EEP	VU	<i>Tapirus terrestris</i>	South American tapir	1.1.0	0.1.0	0.0.0	0.1.0	0.0.0	1.1.0
		ARTIODACTYLA	EVEN-TOED UNGULATES						
EEP	CR	<i>Sus cebifrons</i>	Visayan warty pig	1.1.0	0.0.0	0.0.0	0.0.0	0.0.0	1.1.0
EEP	EN	<i>Rusa alfredi</i>	Alfred's spotted deer	0.0.0	0.0.0	0.3.0	0.0.0	0.0.0	0.3.0
EEP	LC	<i>Giraffa camelopardalis</i>	Giraffe	4.5.0	1.2.0	0.1.0	0.0.0	0.1.0	5.7.0
EEP	VU	<i>Bison bonasus</i>	European wisent	10.7.0	1.3.0	1.0.0	0.0.0	0.2.0	12.8.0
EEP	EW	<i>Oryx dammah</i>	Scimitar-horned oryx	2.3.0	0.0.0	0.0.0	0.0.0	0.0.0	2.3.0
ESB	LC	<i>Kobus leche</i>	Southern lechwe	8.7.0	2.3.0	0.0.0	7.1.0	0.0.0	3.9.0
		TOTAL		233.237.487	14.24.41	9.8.2	20.15.57	0.6.0	233.245.472

* = Group Inventory Counts Included In Row

** = Colony counts included in Row

Included Institutions

[FOTA] Fota Wildlife Park

THE ZOOLOGICAL SOCIETY OF IRELAND

**(A company limited by guarantee and
not having a share capital)**

**Reports and Consolidated
Financial Statements
for the year ended
31 December 2014**

Registered number: 207824

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THE ZOOLOGICAL SOCIETY OF IRELAND

MEMBERS OF COUNCIL AND OTHER INFORMATION

Members of Council:

Council president	Tom Dunphy
Immediate past president	Margaret Sinanan
Ordinary Council members	Dorothy Kilroy Paul Burke Kennedy Richard Collins Martin O'Grady Conor Quinn Michael Daly Nigel Bell

Other information:

Past presidents	Michael O'Grady FCIPI Seán Cromien BA, MRIA, FNCI, F (Mgt), IMI, FZSI Joseph McCullough BE, C Eng, FZSI Michael MacNulty MBA (Harvard) Derek McCleane
Vice president	Richard Collins
Honorary secretary	Dorothy Kilroy
Honorary treasurer	Nigel Bell
Secretary and registered office	Tony Kearney FCCA, ACIS The Zoological Gardens, Phoenix Park, Dublin 8

THE ZOOLOGICAL SOCIETY OF IRELAND

MEMBERS OF COUNCIL AND OTHER INFORMATION *(Continued)*

Auditors	Deloitte & Touche Chartered Accountants and Statutory Audit Firm Deloitte & Touche House Earlsfort Terrace Dublin 2
Bankers	Ulster Bank Limited, 33 College Green, Dublin 2 Bank of Ireland, 2 College Green, Dublin 2 AIB, 37 Upper O'Connell Street, Dublin 1 Rabo Bank, Charlemont Place, Dublin 2 AIB, 66 South Mall, Cork
Solicitors	Mason Hayes & Curran, South Bank House, Barrow Street, Dublin 4 Ronan Daly Jermyn & Company, 12 South Mall, Cork Kilroy Solicitors, 66 Leeson Street Lower, Dublin 2
Charity Number	CHY2964
Company Number	207824

COUNCIL'S REPORT

The Council presents its annual report together with the audited consolidated financial statements for the year ended 31 December 2014.

Consolidation

These accounts form the Consolidated Accounts of the Zoological Society of Ireland which includes the results of both Dublin Zoo and Fota Wildlife Park for the year ended 31 December 2014.

Principal Activities, Business Review And Future Developments

The principal activities of The Zoological Society of Ireland ("the Society") are:

- (a) The operation of a Zoo in the Phoenix Park, Dublin.
- (b) To maintain the Fota Wildlife Park.
- (c) To promote the conservation of wildlife generally worldwide by advancing the study of environmental sciences and knowledge of zoology through science and scientific education.

The attendance for the year ended 31 December 2014 at Dublin Zoo was 1,076,876 (2013: 1,026,613). This was the fourth year in a row that Dublin Zoo has had visitation surpassing the one million mark and 2014 was an all-time record. Fota Wildlife Park also experienced record visitor numbers with 438,114 visitors during the year ended 31 December 2014.

Principal Risks And Uncertainties

The Council considers that the principal risk and uncertainties to the Society relate to weather conditions affecting visitor numbers, uncertainty impacting on the Society relating to an outbreak of animal disease and the economic environment.

Results For The Year

The results for the year are set out on page 64 of the financial statements.

Council

The present members of Council are listed on page 53. On 11 July 2014, Chris Kane resigned from the Council. On 11 September 2014, at the Society's AGM, Nigel Bell and Michael Daly were appointed to the Council.

Legal Status

The Society is limited by guarantee and has no share capital.

Subsidiaries

The information required by Section 158(4) of the Companies Act, 1963 is provided in Note 7 to the financial statements.

THE ZOOLOGICAL SOCIETY OF IRELAND

Governance

The Society is governed by a Council of directors, who under the Society's Articles of Association, are not entitled to remuneration for their services. The members of Council bring their varied experience in their respective fields to bear on guiding the Society. The members of Council are legally responsible for the overall control and management of the Society.

The Council delegates the management of the day to day operation of the Society, the implementation of policy and strategy to the Director (Chief Executive). The executive management team, chaired by the Director and consisting of key senior executives, is the main day to day decision making forum of the Society.

The Council believe that committing to a high level of corporate governance is essential to achieving the optimal standard of operation of the Society's activities. To accomplish this, the Society has a competent executive team. There is clear division of responsibility with the Council retaining control of major decisions, with the Director responsible for devising strategy and policy within authority delegated to him by the Council. The Council is responsible for providing leadership, setting strategy and ensuring control.

The Society has a clear and detailed process for reporting management information to the Council. The Council is provided with regular information, which includes key performance and risk indicators for all aspects of the organisation. The Council meets regularly as required and met 10 times during 2014.

The Council recognise their overall responsibility for the company's systems of internal control and for reviewing their effectiveness. They have delegated responsibility for the implementation of this system to the executive team. This system includes financial controls, which enable the Council to meet its responsibilities for the integrity and accuracy of the Society's accounting records.

The Council is supported by a number of sub-committees (not confined to Council members) established for good governance, as follows:

Audit & Remuneration Committee

The function of the Audit and Remuneration Committee is to review internal financial controls, treasury, and risk management processes. The Committee liaises with the external auditors and reports directly to the Council. It also monitors and reviews the financial performance, including remuneration issues of the Society.

Nominations Committee

The function of the Nominations Committee is to ensure that the composition of the Council and its Committees have the appropriate skills, knowledge and experience. It also ensures that there is effective succession planning.

Conservation & Research Committee

The responsibility of this Committee is to oversee conservation and research projects undertaken and supported by the Society.

Ethics Committee

The Ethics Committee was established to provide guidance and advice on all ethical matters that may arise. The Committee comprises members of the Council, the Zoo Director and some external appointments.

Health & Safety Committee

The responsibility of this Committee is to oversee the health and safety function and ensure that any changes and improvements are implemented. The Committee comprises three members of Council and the Zoo Director.

Books Of Account

The Council members believe that they have complied with the requirements of Section 202 of the Companies Act, 1990 with regard to books of account by employing personnel with appropriate expertise and by providing adequate resources to the financial function. The books of account are maintained at the Society's registered office in The Zoological Gardens, Phoenix Park, Dublin 8.

Post Balance Sheet Events

No significant events have taken place since the year end that would result in adjustment to the financial statements or inclusion of a note thereto.

Health And Safety Policy

The Society has prepared a health and safety policy which is being complied with and satisfactorily operated.

Political Donations

The Society did not make any political donations during the year, which require disclosure in accordance with the Electoral Act, 1997.

Auditors

The auditors, Deloitte & Touche, Chartered Accountants & Statutory Audit Firm, continue in office in accordance with Section 160(2) of the Companies Act, 1963.

On behalf of the Council

Tom Dunphy
Council President

Nigel Bell
Honorary Treasurer

Date: 21st May 2015

STATEMENT OF COUNCIL'S RESPONSIBILITIES

Irish company law requires the members of Council to prepare financial statements for each financial year which give a true and fair view of the state of affairs of the group and the Society and of the surplus or deficit of the group. In preparing these financial statements, the members of Council are required to:

- select suitable accounting policies for the group and Society's financial statements and apply them consistently;
- make judgements and estimates that are reasonable and prudent; and
- prepare the financial statements on the going concern basis unless it is inappropriate to presume that the group and the Society will continue in business.

The members of Council are responsible for keeping proper books of account that disclose with reasonable accuracy at any time the financial position of the group and of the Society and enable them to ensure that the financial statements are prepared in accordance with accounting standards generally accepted in Ireland and comply with Irish statute comprising the Companies Acts, 1963 to 2013. They are also responsible for taking such steps for safeguarding the assets of the group and the Society and hence for taking reasonable steps for the prevention and detection of fraud and other irregularities.

The members of Council are also responsible for preparing a Council's report that complies with the requirements of the Companies Acts, 1963 to 2013.

On behalf of the Council

Tom Dunphy
Council President

Nigel Bell
Honorary Treasurer

Date: 21st May 2015

INDEPENDENT AUDITORS' REPORT

INDEPENDENT AUDITOR'S REPORT TO THE MEMBERS OF THE ZOOLOGICAL SOCIETY OF IRELAND

We have audited the financial statements of The Zoological Society of Ireland for the year ended 31 December 2014, which comprise the Statement of Accounting Policies, the Consolidated Income and Expenditure Account, the Consolidated Statement of Total Recognised Gains and Losses, the Consolidated Balance Sheet, the Company Balance Sheet, the Consolidated Cash Flow Statement and the related notes 1 to 19. The financial reporting framework that has been applied in their preparation is applicable Irish law and accounting standards issued by the Financial Reporting Council and promulgated by the Institute of Chartered Accountants in Ireland (Generally Accepted Accounting Practice in Ireland).

This report is made solely to the company's members, as a body, in accordance with Section 193 of the Companies Act, 1990. Our audit work has been undertaken so that we might state to the 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 company and the company's members as a body, for our audit work, for this report, or for the opinions we have formed.

Respective responsibilities of members of council and auditors

As explained more fully in the Statement of Council's Responsibilities, the members of Council are responsible for the preparation of the financial statements giving a true and fair view. Our responsibility is to audit and express an opinion on the financial statements in accordance with Irish law and International Standards on Auditing (UK and Ireland). Those standards require us to comply with the Auditing Practices Board's Ethical Standards for Auditors.

Scope of the audit of the financial statements

An audit involves obtaining evidence about the amounts and disclosures in the financial statements sufficient to give reasonable assurance that the financial statements are free from material misstatement, whether caused by fraud or error. This includes an assessment of: whether the accounting policies are appropriate to the group's and parent company's circumstances and have been consistently applied and adequately disclosed; the reasonableness of significant accounting estimates made by the council; and the overall presentation of the financial statements. In addition, we read all the financial and non-financial information in the Reports and Consolidated Financial Statements for the year ended 31 December 2014 to identify material inconsistencies with the audited financial statements and to identify any information that is apparently materially incorrect based on, or materially inconsistent with, the knowledge acquired by us in the course of performing the audit. If we become aware of any apparent material misstatements or inconsistencies we consider the implications for our report.

THE ZOOLOGICAL SOCIETY OF IRELAND

Opinion

In our opinion the financial statements:

- give a true and fair view, in accordance with Generally Accepted Accounting Practice in Ireland, of the state of the group's and of the parent company's affairs as at 31 December 2014 and of the group's surplus for the year then ended; and
- have been properly prepared in accordance with the Companies Acts, 1963 to 2013.

Matters on which we are required to report by the Companies Acts, 1963 to 2013

- We have obtained all the information and explanations which we consider necessary for the purposes of our audit.
- In our opinion proper books of account have been kept by the parent company.
- The parent company's financial statements are in agreement with the books of account.
- In our opinion the information given in the directors' report is consistent with the financial statements.

Matters on which we are required to report by exception

We have nothing to report in respect of the provisions in the Companies Acts, 1963 to 2013 which require us to report to you if, in our opinion the disclosures of directors' remuneration and transactions specified by law are not made.

Thomas Cassin

**For and on behalf of Deloitte & Touche
Chartered Accountants and Statutory
Audit Firm Dublin**

21 May 2015

STATEMENT OF ACCOUNTING POLICIES

The significant accounting policies adopted by the Society are:

Basis of Accounting

The financial statements are prepared under the historical cost convention in accordance with accounting standards generally accepted in Ireland and Irish statute comprising the Companies Acts 1963 to 2013. Accounting standards generally accepted in Ireland in preparing financial statements giving a true and fair view are those issued by the Financial Reporting Council and published by the Institute of Chartered Accountants in Ireland.

Basis of Consolidation

The consolidated financial statements incorporate the financial statements of the company and its subsidiary undertaking for the year ended 31 December 2014.

Income

Income comprises annual pass and membership subscriptions relating to the current period. Where subscriptions are received in advance, they are included in deferred income in creditors and released to the income and expenditure account in the relevant period.

Life membership subscriptions are amortised to the income and expenditure account based on the estimated useful life of membership which is considered ten years.

Other income comprises the value of sales, excluding VAT, to third parties and is recognised once the related goods or services are provided to customers.

Tangible Fixed Assets And Depreciation

Tangible fixed assets are stated at cost less accumulated depreciation and any provision for impairment.

The charge for depreciation is calculated to write down the cost of tangible fixed assets to their estimated residual values by equal annual instalments over their expected useful lives as follows:

Plant, machinery and equipment	20%
Computer equipment and software	33⅓%
Motor vehicles	20%
Buildings and habitats	10%

Land and assets under construction are not depreciated.

Financial Assets

Financial assets are stated at cost less provision for impairment.

Government Support

The land in the Phoenix Park occupied by the Zoo ("the Society") is used under a licence from the State, the Society being a tenant at will. No value is reflected in these financial statements in respect of this licence or this land.

THE ZOOLOGICAL SOCIETY OF IRELAND

The Government Capital Investment Programme in the Society is provided and accounted for by the Office of Public Works (OPW) and any related assets are therefore excluded in these financial statements. The accounts of the Society reflect only its disbursements for the OPW under this programme. The facilities provided under this Programme are used by the Society under licence from the State.

Other Government grants in respect of capital expenditure are credited to a deferred grant account and are amortised to the income and expenditure account by equal annual instalments over the expected useful lives of the related assets.

Leases

Expenditure on operating leases is charged to the income and expenditure account on a basis representative of the benefit derived from the asset, normally on a straight line basis over the lease period.

Animals

No value is placed on the animals belonging to the Society.

Stocks

Stocks, other than animals, are stated at the lower of cost and net realisable value.

Foreign Currencies

Transactions in foreign currencies are recorded at the rate ruling at the date of the transactions or at a contracted rate. The resulting monetary assets and liabilities are translated at the balance sheet rate or the contracted rate and the exchange differences are dealt with in the income and expenditure account.

Pensions

The group operates both defined benefit and defined contribution schemes.

Defined contribution scheme

Pension contributions in respect of defined contribution schemes are charged to income and expenditure as they become payable in accordance with the rules of the scheme. The assets are held separately from those of the group in an independently administered fund. Differences between the amounts charged in the profit and loss account and payments made to pension funds are treated as assets or liabilities.

Defined benefit scheme

The pension costs in respect of defined benefit schemes are charged to the income and expenditure account on a systematic basis, based on the actuary's calculations. Past service costs are recognised in the income and expenditure account on a straight line basis over the period in which increases in benefit vest. Differences between the amounts charged in the income and expenditure account and payments made to pension funds are treated as assets or liabilities. Assets in the scheme are measured at their fair value

at the balance sheet date. Defined benefit liabilities are measured on an actuarial basis using the projected unit method. The assets and liabilities of the scheme are subject to a full actuarial valuation by an external professionally qualified actuary triennially and are reviewed annually by the actuary and updated to reflect current conditions.

The excess or shortfall in the value of the assets in the scheme over or below the present value of the scheme liabilities is recognised as an asset or liability when the amounts can be recovered through reduced contributions or refunds from the scheme.

Actuarial gains and losses arise on the valuation of the scheme's assets and liabilities and are released to the statement of total recognised gains and losses.

Taxation

The group is regarded by the Revenue Commissioners as established for charitable purposes and, accordingly, is exempt from corporation tax.

THE ZOOLOGICAL SOCIETY OF IRELAND

CONSOLIDATED INCOME AND EXPENDITURE ACCOUNT FOR THE YEAR ENDED 31 DECEMBER 2014

	Notes	2014 €'000	2013 €'000
INCOME	1	17,339	16,109
EXPENDITURE			
Operating costs		(13,898)	(13,356)
Administration expenses		<u>(720)</u>	<u>(576)</u>
TOTAL EXPENDITURE		<u>(14,618)</u>	<u>(13,932)</u>
OPERATING SURPLUS	3	2,721	2,177
Interest payable		(72)	(73)
Interest income	4	132	140
Amortisation of government grants	12	32	25
SURPLUS FOR THE YEAR	14	<u>2,813</u>	<u>2,269</u>

Results in the current and previous year arose solely from continuing operations.

The financial statements were approved by the Council on 21st May 2015 and signed on its behalf by:

Tom Dunphy
Council President

Nigel Bell
Honorary Treasurer

(A company limited by guarantee and not having a share capital)

CONSOLIDATED STATEMENT OF TOTAL RECOGNISED GAINS AND LOSSES FOR THE YEAR ENDED 31 DECEMBER 2014

	Notes	2014 €'000	2013 €'000
SURPLUS FOR THE YEAR		2,813	2,269
Actuarial (loss)/gain recognised on defined benefit scheme	13	<u>(261)</u>	<u>208</u>
TOTAL RECOGNISED GAINS RELATING TO THE YEAR		<u>2,552</u>	<u>2,477</u>

THE ZOOLOGICAL SOCIETY OF IRELAND

CONSOLIDATED BALANCE SHEET AS AT 31 DECEMBER 2014		2014	2013
		€'000	€'000
FIXED ASSETS	Notes		
Tangible assets	6	<u>15,744</u>	<u>12,639</u>
CURRENT ASSETS			
Stocks	8	183	242
Debtors	9	462	447
Cash at bank and in hand			
– OPW grant	10	30	30
– Other		9,096	8,731
		<u>9,771</u>	<u>9,450</u>
CREDITORS: (Amounts falling due within one year)	10	<u>(3,899)</u>	<u>(3,068)</u>
NET CURRENT ASSETS		<u>5,872</u>	<u>6,382</u>
TOTAL ASSETS LESS CURRENT LIABILITIES		21,616	19,021
CREDITORS: (Amounts falling due after more than one year)	11	(250)	(250)
OTHER DEFERRED GRANTS	12	(444)	(471)
NET ASSETS EXCLUDING PENSION		<u>20,922</u>	<u>18,300</u>
Pension asset	13	30	100
NET ASSETS INCLUDING PENSION ASSET		<u>20,952</u>	<u>18,400</u>
Accumulated surplus	14	6,951	11,645
Development reserve	14	12,000	5,000
Emergency reserve	14	2,001	1,755
		<u>20,952</u>	<u>18,400</u>

The financial statements were approved by the Council on 21st May 2015 and signed on its behalf by:

Tom Dunphy

Council President

Nigel Bell

Honorary Treasurer

(A company limited by guarantee and not having a share capital)

COMPANY BALANCE SHEET AS AT 31 DECEMBER 2014

	Notes	2014 €'000	2013 €'000
FIXED ASSETS			
Tangible assets	6	7,220	6,447
Financial assets	7	<u>500</u>	<u>500</u>
		7,720	6,947
CURRENT ASSETS			
Stocks	8	114	99
Debtors	9	476	341
Cash at bank and in hand:			
– OPW grant	10	30	30
– other		<u>8,549</u>	<u>6,873</u>
		9,169	7,343
CREDITORS: (Amounts falling due within one year)	10	<u>(2,704)</u>	<u>(2,127)</u>
NET CURRENT ASSETS		6,465	5,216
NET ASSETS		<u>14,185</u>	<u>12,163</u>
Represented by:			
Accumulated surplus	14	5,184	5,408
Development reserve	14	7,000	5,000
Emergency reserve	14	<u>2,001</u>	<u>1,755</u>
		<u>14,185</u>	<u>12,163</u>

The financial statements were approved by the Council on 21st May 2015 and signed on its behalf by:

Tom Dunphy
Council President

Nigel Bell
Honorary Treasurer

THE ZOOLOGICAL SOCIETY OF IRELAND

CONSOLIDATED CASH FLOW STATEMENT FOR THE YEAR ENDED 31 DECEMBER 2014

	Notes	2014 €'000	2013 €'000
NET CASH INFLOW FROM OPERATING ACTIVITIES	16	4,911	3,269
RETURNS ON INVESTMENTS AND SERVICING OF FINANCE			
Interest received		85	97
Interest & charges paid		(72)	(73)
		<u>13</u>	<u>24</u>
CAPITAL EXPENDITURE AND FINANCIAL INVESTMENT			
Payments to acquire tangible fixed assets		(4,564)	(1,995)
Development funds received from SECAD		5	195
OPW development expenditure		-	(24)
		<u>(4,559)</u>	<u>(1,824)</u>
NET CASH OUTFLOW FROM CAPITAL EXPENDITURE AND FINANCIAL INVESTMENT		(4,559)	(1,824)
INCREASE IN CASH AND CASH EQUIVALENTS	17	365	1,469

NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS FOR THE YEAR ENDED 31 DECEMBER 2014

1. INCOME	2014	2013
Income arises from the following activities undertaken wholly within Ireland.	€'000	€'000
Gate receipt income	11,390	10,334
Annual pass and membership income	2,357	2,237
Shop income	2,273	2,203
Other income	1,319	1,335
	<u>17,339</u>	<u>16,109</u>

2. EMPLOYEE INFORMATION	2014	2013
Staff numbers and costs		
Average number of employees:		
Management	10	10
Administration	18	14
General staff		
- full time	96	94
- part time	16	15
Shop	10	10
	<u>150</u>	<u>143</u>

The aggregate payroll costs of these persons were as follows	2014	2013
	€'000	€'000
Wages and salaries	5,292	4,927
Social welfare costs	550	507
Defined benefit pension costs (Note 13)	39	40
Defined contribution pension costs	303	164
	<u>6,184</u>	<u>5,638</u>

THE ZOOLOGICAL SOCIETY OF IRELAND

NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS FOR THE YEAR ENDED 31 DECEMBER 2014 (Continued)

3. OPERATING SURPLUS

	2014	2013
	€'000	€'000
The operating surplus is stated after charging:		
Remuneration of Members of Council		
- Fees	-	-
- Other emoluments	-	-
Auditor's remuneration in respect of the entity	18	18
Auditor's remuneration in respect of the group accounts (including the entity)	25	25
Depreciation	1,439	1,326
Operating lease charges	13	11
Loss on disposal of fixed asset	20	-
	<u> </u>	<u> </u>

Under the Society's Articles of Association, Members of Council are not entitled to remuneration. Auditor's remuneration is disclosed net of VAT.

4. INTEREST INCOME

	2014	2013
	€'000	€'000
Deposit interest	85	97
Net finance income on defined benefit pension scheme (Note 13)	47	43
	<u> </u>	<u> </u>
	<u>132</u>	<u>140</u>

5. TAXATION

No liability to taxation arose during the year as the Society is exempt from corporation tax.

NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS FOR THE YEAR ENDED 31 DECEMBER 2014 (Continued)

6. TANGIBLE FIXED ASSETS

Group

	Land €'000	Plant Machinery & Equipment €'000	Computer Equipment & Software €'000	Motor Vehicles €'000	Buildings & Habitats €'000	Total €'000
Cost:						
At 1 January 2014	191	4,030	1,388	423	15,726	21,758
Additions	-	147	154	118	4,145	4,564
Disposals	-	-	(11)	(54)	(30)	(95)
At 31 December 2014	191	4,177	1,531	487	19,841	26,227
Depreciation:						
At 1 January 2014	-	3,224	1,259	333	4,303	9,119
Charge for year	-	241	95	30	1,073	1,439
On disposals	-	-	(11)	(40)	(24)	(75)
At 31 December 2014	-	3,465	1,343	323	5,352	10,483
Net Book Value:						
At 31 December 2014	191	712	188	164	14,489	15,744
At 31 December 2013	191	806	129	90	11,423	12,639

THE ZOOLOGICAL SOCIETY OF IRELAND

NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS FOR THE YEAR ENDED 31 DECEMBER 2014 (Continued)

Company	Land €'000	Plant Machinery & equipment €'000	Computer equipment & software €'000	Motor vehicles €'000	Habitats €'000	Total €'000
Cost:						
At 1 January 2014	191	2,221	1,388	245	7,910	11,955
Additions	-	51	154	3	1,558	1,766
Disposals	-	-	(11)	(8)	(30)	(49)
At 31 December 2014	191	2,272	1,531	240	9,438	13,672
Depreciation:						
At 1 January 2014	-	1,892	1,259	223	2,134	5,508
Charge for year	-	101	95	6	785	987
On disposals	-	-	(11)	(8)	(24)	(43)
At 31 December 2014	-	1,993	1,343	221	2,895	6,452
Net Book Value:						
At 31 December 2014	191	279	188	19	6,543	7,220
At 31 December 2013	191	329	129	22	5,776	6,447

Included in habitats at 31 December 2014 are assets under construction which amounted to €1.5m.

NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS FOR THE YEAR ENDED 31 DECEMBER 2014 (Continued)

7. FINANCIAL ASSETS

Company

The Society's financial asset comprises its investment in Fota Wildlife Park Limited ("Fota"), a company limited by guarantee. Fota is accounted for as a subsidiary undertaking as the Society is a member of Fota Wildlife Park Limited and has the power to appoint a majority of the Governors of the Fota Board.

Details in respect of Fota are set out below:

Name and registered office	Country of Incorporation	Principal activity
Fota Wildlife Park Limited	Ireland	Operation of a wildlife park

8. STOCKS

	Group		Company	
	2014	2013	2014	2013
	€'000	€'000	€'000	€'000
Shops	154	220	85	77
Consumables	29	22	29	22
	<u>183</u>	<u>242</u>	<u>114</u>	<u>99</u>

The replacement cost of stocks does not differ materially from the amounts shown above.

THE ZOOLOGICAL SOCIETY OF IRELAND

NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS FOR THE YEAR ENDED 31 DECEMBER 2014 (Continued)

9. DEBTORS:

(Amounts falling due within one year)

	Group		Company	
	2014 €'000	2013 €'000	2014 €'000	2013 €'000
Trade debtors	179	172	173	126
Prepayments and other debtors	283	268	238	215
VAT	-	7	-	-
Amounts due from subsidiary undertakings (Note 19)	-	-	65	-
	<u>462</u>	<u>447</u>	<u>476</u>	<u>341</u>

NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS FOR THE YEAR ENDED 31 DECEMBER 2014 (Continued)

10. CREDITORS: (Amounts falling due within one year)

	Group		Company	
	2014 €'000	2013 €'000	2014 €'000	2013 €'000
Bank loan (Note 11)	250	250	-	-
Trade creditors	1,185	875	641	528
Accruals and deferred income	2,202	1,570	1,843	1,290
PAYE/PRSI	188	302	154	238
VAT	44	41	36	41
	<u>3,869</u>	<u>3,038</u>	<u>2,674</u>	<u>2,097</u>
OPW grant	30	30	30	30
	<u>3,899</u>	<u>3,068</u>	<u>2,704</u>	<u>2,127</u>

In prior periods, the OPW issued grants to the Society. These funds are to be used solely for purposes of development projects authorised by the OPW. All expenditure on such projects is approved by the OPW prior to payment. At 31 December 2014, €30,000 (2013: €30,000) remained unspent from the grant received and has been included in creditors and cash.

	2014 €'000	2013 €'000
At beginning of year	30	54
Expended during the year	<u>-</u>	<u>(24)</u>
At end of year	<u>30</u>	<u>30</u>

THE ZOOLOGICAL SOCIETY OF IRELAND

NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS FOR THE YEAR ENDED 31 DECEMBER 2014 (Continued)

11. CREDITORS (Amounts falling due after more than one year)

	Group	
	2014	2013
	€'000	€'000
Bank loan	<u>250</u>	<u>250</u>
Loan maturity analysis:		
	2014	2013
	€'000	€'000
In one year or less, or on demand	250	250
Between one and two years	250	250
Between two and five years	-	-
After more than five years	-	-
	<u>500</u>	<u>500</u>

NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS FOR THE YEAR ENDED 31 DECEMBER 2014 (Continued)

12. OTHER DEFERRED GRANTS

	Group	
	2014	2013
	€'000	€'000
Government grants		
Received and receivable:		
At beginning of year	830	635
Received during the year	5	195
At end of year	<u>835</u>	<u>830</u>
Amortisation:		
At beginning of year	359	334
Amortised to income and expenditure	32	25
At end of year	<u>391</u>	<u>359</u>
Net book amount	<u>444</u>	<u>471</u>

The receipt of funding of €200,000 (2013: €195,434) from SECAD is subject to terms and conditions and if these are not adhered to, SECAD reserves the right to deem the contract to be invalid and all grant aid shall be immediately repayable.

THE ZOOLOGICAL SOCIETY OF IRELAND

NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS FOR THE YEAR ENDED 31 DECEMBER 2014 (Continued)

13. PENSION ASSET

Defined benefit pension scheme

The group operates a defined benefit pension scheme. Pension costs for the defined benefit pension scheme members are assessed in accordance with the advice of independent qualified actuaries using the projected unit method.

The most recent actuarial valuation of the group's pension scheme was carried out as at 1 April 2013.

The best estimate of pension contributions for the year ended 31 December 2015 is €180,000 and the Board intends to contribute additional funding.

The financial assumptions used to calculate the value of the defined benefit pension scheme's liabilities under FRS 17 are:

	2014	2013	2012
	%	%	%
Rate of general increase in salaries	3.00	3.00	3.00
Rate of increase in pensions in payment	0.00	0.00	0.00
Discount rate of scheme liabilities	2.10	3.40	3.20
Inflation	1.50	2.00	2.00

NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS FOR THE YEAR ENDED 31 DECEMBER 2014 (Continued)

13. PENSION ASSET (Continued)

Amounts recognised in the income and expenditure account in respect of the defined benefit pension scheme is as follows:

	2014	2013
	€'000	€'000
Current service cost	39	40
Expected return on pension scheme assets	(135)	(129)
Interest on pension scheme liabilities	88	86
	<u>(8)</u>	<u>(3)</u>

The amount included in the balance sheet arising from the group's obligations in respect of its defined benefit retirement scheme is as follows:

	2014	2013
	€'000	€'000
Total market value of assets	3,299	2,709
Present value of the scheme's liabilities	(3,269)	(2,609)
Net asset recognised in the balance sheet	<u>30</u>	<u>100</u>

THE ZOOLOGICAL SOCIETY OF IRELAND

NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS FOR THE YEAR ENDED 31 DECEMBER 2014 (Continued)

13. PENSION ASSET (Continued)

Movements in the surplus in the scheme during the year arose as follows:

	2014	2013
	€'000	€'000
At 1 January	100	(230)
Current service cost	(39)	(40)
Contributions	183	119
Other financial income	47	43
Actuarial (loss)/gain	(261)	208
	<u>30</u>	<u>100</u>
At 31 December	<u>30</u>	<u>100</u>

Movement in Scheme Assets and Liabilities	Pension	Pension	Pension
	Assets	Liabilities	Deficit
	€'000	€'000	€'000
At 1 January 2014	2,709	(2,609)	100
Current service cost	-	(39)	(39)
Interest on scheme liabilities	-	(88)	(88)
Expected return on scheme assets	490	-	490
Contributions by plan participants	183	-	183
Benefits paid	(83)	83	-
Actuarial gain	-	(616)	(616)
	<u>3,299</u>	<u>(3,269)</u>	<u>30</u>
At 31 December 2014	<u>3,299</u>	<u>(3,269)</u>	<u>30</u>

NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS FOR THE YEAR ENDED 31 DECEMBER 2014 (Continued)

13. PENSION ASSET (Continued)

Basis of expected rate of return on scheme assets

As at 31 December 2014 based on the yield on the Merrill Lynch Eurozone bond index we have assumed an expected long-term return on bonds equal to 1.8%. The expected long-term return on equities is equal to the bond return plus an assumed equity premium of 4.8% per annum. This gives an assumed equity return of 6.6% per annum. The assumed return on property is assumed to be 2% below the rate of return on equities. The return on cash ("other") is assumed to be 0.5% per annum. The analysis of the scheme's assets and the expected rate of return at the balance sheet date were as follows:

	Expected return 31 December 2014 %	Fair value at 31 December 2014 €'000	Expected return 31 December 2013 %	Fair value at 31 December 2013 €'000
Equities	6.60	1,634	6.50	1,447
Bonds	1.80	1,297	3.00	984
Property	4.60	52	4.50	48
Other	0.50	316	3.20	230
Total market value of assets		<u>3,299</u>		<u>2,709</u>

THE ZOOLOGICAL SOCIETY OF IRELAND

NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS FOR THE YEAR ENDED 31 DECEMBER 2014 (Continued)

13. PENSION ASSET (Continued)

Analysis of amount recognised in the statement of total recognised gains and losses:	2014 €'000	2013 €'000	
Gain on assets	355	85	
Experience gain on liabilities	25	41	
(Loss)/Gain on change in assumptions	<u>(641)</u>	<u>82</u>	
Actuarial (loss)/gain to be recognised in statement of total realised gains and losses	<u><u>(261)</u></u>	<u><u>208</u></u>	
The experience gains and losses are as follows:	2014	2013	2012
Difference between the expected and actual return on scheme assets			
- amount (€'000)	355	85	159
- percentage of scheme's assets	10.8%	3.1%	6.4%
Experience gains and losses on scheme's liabilities			
- amount (€'000)	25	41	33
- percentage of the present value of the scheme's liabilities	0.8%	1.5%	1.2%
Change in actuarial assumptions to value liabilities			
- amount (€'000)	(641)	82	(647)
- percentage of the present value of the scheme's liabilities	(19.6%)	3.1%	(23.9%)
Total amount included in statement of total recognised gains and losses			
- amount (€'000)	(261)	208	(455)
- percentage of the present value of the scheme's - liabilities	(8.0%)	8.0%	(16.8%)

NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS FOR THE YEAR ENDED 31 DECEMBER 2014 (Continued)

13. PENSION ASSET (Continued)

Mortality

No mortality table used pre-retirement (all members assumed to survive to NRA).

Post-retirement tables used are 62% PNML 00 (Males) and 70% PNFL 00 (females) plus allowance for future mortality improvements.

Expected Lifetime

The expected lifetime of a participant who is aged 65 and the expected lifetime (from the age 65) of a participant who will be aged 65 in 25 years are shown in years below based on the above mortality tables

AGE	Males	Females
65	21.5	23.0
65 in 25 years	<u>24.5</u>	<u>25.4</u>

THE ZOOLOGICAL SOCIETY OF IRELAND

NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS FOR THE YEAR ENDED 31 DECEMBER 2014 (Continued)

14. RESERVES	Accumulated surplus €'000	Development reserve €'000	Emergency reserve €'000	Total €'000
Group				
At beginning of year	11,645	5,000	1,755	18,400
Surplus for year	2,813	-	-	2,813
Actuarial loss recognised on defined benefit pension scheme	(261)	-	-	(261)
Transfer	<u>(7,246)</u>	<u>7,000</u>	<u>246</u>	<u>-</u>
At end of year	<u>6,951</u>	<u>12,000</u>	<u>2,001</u>	<u>20,952</u>
Company				
At beginning of year	5,408	5,000	1,755	12,163
Surplus for year	2,022	-	-	2,022
Transfer	<u>(2,246)</u>	<u>2,000</u>	<u>246</u>	<u>-</u>
At end of year	<u>5,184</u>	<u>7,000</u>	<u>2,001</u>	<u>14,185</u>

NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS FOR THE YEAR ENDED 31 DECEMBER 2014 (Continued)

15. TRANSFER TO DEVELOPMENT AND EMERGENCY RESERVES

The Members of Council have decided to transfer €246,000 (2013: €23,000) from the accumulated surplus to the emergency reserve and €7,000,000 (2013: €Nil) from the accumulated surplus to the development reserve. The Members of Council continue to monitor the strategic development of the Zoo's facilities and future capital investment projects.

16. RECONCILIATION OF SURPLUS BEFORE INTEREST TO NET CASH INFLOW FROM OPERATING ACTIVITIES

	2014	2013
	€'000	€'000
Operating surplus	2,721	2,177
Depreciation of tangible fixed assets	1,439	1,326
Loss on disposal of fixed asset	20	-
Effect of defined benefit pension scheme	(144)	(78)
Decrease in stocks	59	28
(Increase)/decrease in debtors	(15)	27
Increase/(decrease) in non OPW creditors	831	(211)
	<u>4,911</u>	<u>3,269</u>
Net Cash Inflow From Operating Activities	4,911	3,269

THE ZOOLOGICAL SOCIETY OF IRELAND

NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS FOR THE YEAR ENDED 31 DECEMBER 2014 (Continued)

17. ANALYSIS OF MOVEMENT IN NET FUNDS

	At beginning of year €'000	Cashflows €'000	At end of year €'000
Cash at bank and in hand	8,761	365	9,126
Bank loan	<u>(500)</u>	<u>-</u>	<u>(500)</u>
Net funds	<u>8,261</u>	<u>365</u>	<u>8,626</u>

18. COMMITMENTS AND CONTINGENCIES

At 31 December 2014, the Society had authorised and contracted for capital expenditure of €2,068,963 and had authorised capital expenditure but not yet contracted of €4,407,463 (2013: €5,600,000).

19. APPROVAL OF FINANCIAL STATEMENTS

The consolidated financial statements were approved by the Council on 21st May 2015.



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Design by Wilson Creative

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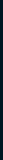
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