

QUARTERLY PUBLICATION OF THE EUROPEAN ASSOCIATION OF ZOOS AND AQUARIA

ZOOQUARIA

SUMMER 2017

ISSUE 97

OUTSMARTING THE POACHERS

HOW A SMARTPHONE APP COULD
SAVE THE NGULIA RHINO



Underwater forests

INSIDE LISBON'S ASTONISHING NATURE AQUARIUM

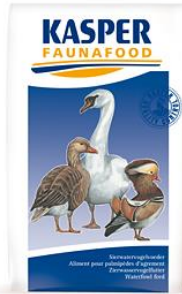


Let It Grow

TAKING BIODIVERSITY TO THE CLASSROOM

Dry food *St Laurent*

Lundi
Kasper
Nutrazu
St Laurent
Kaytee



Frozen food *St Laurent*

Frozen food for birds, large carnivores
Frozen meat for dogs, cats and ferrets
Frozen insects
Rodents



St Laurent

Food and equipment for wild and domestic animals



Equipment

Breeding
Capture
Transport
Equipment
Accessories
Enrichment



Vitamins

Vitamins for marine animals
Vitamins for birds, carnivores
Hygiene products
Supplements



SAS Saint Laurent

ZA du Bouillon - 79430 LA CHAPELLE SAINT LAURENT (France)

Tel: +33 (0) 549 720 920 - Fax: +33 (0) 549 721 112 - commercial@st-laurent.fr - www.st-laurent.fr





4 From the Director's chair

Our Director reports back on the key achievements of the spring conference season

5 Noticeboard

Feedback from the EAZA Spring Council and AGM

7 Book report

A new book offers a blueprint for successful conservation projects

8 Births & hatchings

Maned wolves, aardvarks and sika deer join the EAZA community

10 Conferences

A record number of attendees made this year's Directors' Days a huge success

12 Public relations

Why Durrell's CEO reclaimed the word 'zoo' for her organisation

14 Interview

Stephanie Sanderson discusses her role as the Director of EAZZW

16 Campaigns

The latest news from the Let It Grow campaign

18 Education

How primary school pupils enjoyed a lesson in conservation

19 EEP report

Action Indonesia calls for more participants in the Banteng EEP

20 Population management

The finer points of creating a Long-Term Management Plan

21 Breeding programmes

An update on breeding progress for the Eurasian lynx

22 Technology

How an ingenious phone app is helping to protect the Ngulia rhino

24 Conservation noticeboard

Financial analysis – and news of the next EAZA Conservation Forum

25 Conservation

CPSG takes on a new title and refocuses its plans for the future

26 Exhibits

How Takashi Amano's vision for a nature aquarium was brought to life

28 Conference news

Feedback from the latest EZE conference in Paris

30 Comment

Should we take online petitions seriously?

Zooquaria

EDITORIAL BOARD:

Executive Director Myfanwy Griffith (Myfanwy.Griffith@eaza.net)

Managing Editor David Williams-Mitchell (David.Williams-Mitchell@eaza.net)

Editor Joanna Swinnerton

Editorial Staff Danny de Man, William van Lint

Designer Louise Tait

Zooquaria is the quarterly magazine of the European Association of Zoos and Aquaria (EAZA).



EAZA Executive Office, PO Box 20164, 1000 HD Amsterdam, The Netherlands.

Email: info@eaza.net ISSN 2210-3392 Cover image: Ngulia rhino

For information on print subscriptions to Zooquaria visit:

<http://www.eaza.net/about-us/communications>

The views expressed in this magazine are not necessarily those of EAZA.

The paper used for printing is FSC quality (sustainable). Organic inks are used.

Plates for printing are free of chemicals. All waste is disposed of in an environmentally friendly manner. Printed by Euro Mail BV.



FROM THE DIRECTOR'S CHAIR

It has been a very busy spring conference season, with lots to think about and many plans to make for the future. But, before I comment on that I would like to take a moment to remember a friend, colleague and previous EAZA Director Harry Schram, who sadly passed away in March. I had the privilege to work with Harry on many occasions and will miss his encyclopaedic knowledge and willingness to help anyone in any way he could.

In April, our Directors' Days and Annual General Meeting (AGM) marked the first year in position for our new Chairman, Executive Committee and many Council Members. It has been pleasing to see a smooth handover and how engaged everyone continues to be. An overview of the topics and outcomes of Directors' Days is given on page 10, but I wanted to take this opportunity to highlight some fantastic milestone decisions agreed by the Members at the AGM.

The first of these was the approval to roll out the new EAZA Ex Situ Programme management structure from 2018. Many of you have fed into discussions about this step-change for EAZA and have helped to shape how and why we manage the species in our care. It puts EAZA at the forefront of population management and will guide our programmes well into the future. I see it as a truly collaborative achievement and would like to thank all involved, particularly the EEP Committee for leading on this.

The other milestone from the AGM was the decision to change the EAZA fee structure in 2018. As with the development of the EAZA Ex Situ Programme structure, this was a collaborative effort, stemming from input from Members and Committees into the EAZA Strategy 2017–2020 (please see the article in *Zooquaria* 96 for an overview of the Strategy). The agreed new fee structure is closely linked to the Strategy and was developed by the Executive Committee based on directions from Council. There was an informed and inclusive discussion of it at the AGM before the majority approval vote was passed. To truly implement our forward-thinking Strategy, it was clear that we needed additional resources. We have firm ambitions to progress our successful work in conservation, lobbying, programme management, communication and education strategies, and I am delighted that the change in fees will greatly support EAZA and its Membership in reaching our full potential.

Along with several EAZA colleagues, I went to the 4th Global Animal Welfare Congress hosted by WAZA and the Detroit Zoological Society. The theme of this congress was 'Zoos and Aquariums as Welfare Centres: Ethical Dimensions and Global Commitment', and its aim was to get welfare scientists, ethicists and global zoo and aquarium CEOs to share their knowledge and advance animal welfare. Needless to say, at the start of the congress there were a number of opposing views and some concern about whether people had open minds. By the end of the conference, I felt that many

barriers had been broken down and a better understanding was reached, even if not all the views were aligned. The session showcasing all the great welfare research going on in zoos worldwide was very well received and could easily have been expanded to fill the whole Congress time. Both this session and a panel discussion about public perceptions and media interactions reinforced our view that we still need to do more to engage with the general public and the media about the work that we do. Thinking strategically about the stories we have to tell, and using them to make and keep regular connections with local media providers, is essential for the success of any zoo or aquarium.

One popular call from the animal protectionists was for zoos and aquariums to end their breeding programmes and stop transferring animals between institutions, and to move towards a sanctuary-based model housing only rescued animals. Personally, I see many flaws in this concept; however, it is an idea that is gaining momentum and we ignore thinking about how to address it at our peril. We are all aware that many people and the media view 'sanctuaries' as a term for all that is positive and good about animal welfare in human care. Conversely, 'zoos' are often all grouped together under a banner of indifference towards animals and poor welfare. As a community of leading zoos and aquariums, we need to address these misconceptions both individually and as a group via our national and regional associations. The mixture of effective local communications about what your individual zoo is doing, and the feeding of this information to your associations so that aggregated communications can occur, is a powerful way to raise the positive profile of zoos and aquariums.

This last point leads me to another topic of discussion at the Congress, that of who has the responsibility to improve conditions in 'bad' institutions. Some felt it was the responsibility of national governments and legislators, some felt that it sits with animal protection organisations, and others that it is the role of zoo and aquarium associations. In reality it is likely to be a combination of all three. EAZA already has the Candidate for Membership programme and Technical Assistance Committee to support zoos who want to improve. We also have had considerable input into the EU Zoos Directive review process to influence legislation governing zoos (see more on page 6) but, should we be doing more? We will need to think carefully about this going forwards.


Myfanwy Griffith
Executive Director, EAZA

NOTICEBOARD

SPRING COUNCIL

The 2017 Spring Council meeting was held at Chester Racecourse on Wednesday 26 April. The Council made the following decisions:

Council approved the appointment of two new representatives, Tiit Maran (Tallinn Zoo) representing Estonia, and Gary Batters (Zoological Society of East Anglia) representing the UK. Both will serve on Council until the end of the term in 2019.

Council approved the Guidelines for Ethical Suppliers (2017), providing advice on maintaining sustainable practices in the sourcing of products and services by EAZA Members. These are available on the EAZA website.

The new population management structure was also approved, enabling our managed programmes – renamed as EAZA Ex Situ Programmes (EEPs) – to set up more tailor-made management structures with the aim of achieving better-defined programme goals and roles. The so-called One Plan Approach, as well as the five-step assessment process from the IUCN Species Survival Commission Guidelines on the Use of *Ex Situ* Management for Species Conservation, are important pillars for the design of these management structures. The new population management structure will be implemented from 2018 onwards.

Council approved a change in the fee structure aimed at increasing revenue for the Association to fulfil its Strategy

2017–2020, which opened the way to ratification by the Annual General Meeting (see below).

Following consultation with an external contractor, Council decided not to proceed with a proposal to move the EAZA Executive Office to Brussels to improve lobbying performance. The recommendation noted that EAZA would require additional technical lobbying expertise in the EU capital but that moving all staff to the city would not bring significant advantages in lobbying.

Council also approved the EAZA Position Statement on Circus Membership of the Association (2017), which is now available on the EAZA website.

Approval of recommendations for institutions via the EAZA application procedure

a. New Applicants

- i. Full Membership
 1. Tayto Park, Ireland
 - ii. Temporary Membership (2 years)
 1. Serengeti-Park Hodenhagen, Germany
 2. Pécs Zoo, Hungary
 3. Woodside Wildlife Park, UK
 - iii. Delay of Decision
 1. ZOO Dvůr Králové, Czech Republic (until Sept. 2017)

b. Continuing Temporary Members

- i. South Lakes Safari Zoo/Cumbria Zoo, UK

- ii. Monde Sauvage, Belgium
- iii. Exmoor Zoo, UK
- iv. Terra Natura Murcia, Spain

c. Corporate Members update

- i. New Members
 1. Crossborder Animal Services, the Netherlands
 2. Fox Consulting, France
- ii. New Corporate Member Package – a three-tier system allowing Corporate Members to deepen their relationship with EAZA was approved.

EAZA Accreditation Programme screening recommendations

d. Maintain Full Membership

- i. Parc Zoologique de Thoiry, France
- ii. Faunia, Madrid, Spain
- iii. Zoo Aquarium Madrid, Spain
- iv. Barcelona Zoo, Spain

e. Temporary Membership (2 years)

- i. Belfast Zoo, UK
- ii. Nausicaä Centre National de la Mer, France

f. Termination of Membership

- i. Zoo d'Amnéville (or Parc Zoologique d'Amnéville), France

ANNUAL GENERAL MEETING

The Annual General Meeting was held at Chester Racecourse on Thursday 27 April. AGM approved the 2016 Financial Report of the Association and the proposal for a fee change in 2018 to assist with fulfilling the EAZA Strategy 2017–2020. AGM also approved all Membership and Ethics Committee recommendations adopted by Council since April 2016, and approved the appointment of Gary Batters, Tiit Maran, Svetlana Akulova (Moscow Zoo, representing Russia) and Javier Almunia (Loro Parque, representing Spain) to the EAZA Council, to serve until the end of the term in 2019.

AGM also approved the proposal that the Membership and Ethics Committee initiate discussions on the mentoring of smaller institutions to help them reach their full potential as EAZA Members.

The next Spring Council and Annual General Meetings will be held in Antwerp 18–20 April 2018.

EAZA CORPORATE MEMBERS

a. hartrodt	www.hartrodt.com
Aqua Medic	www.aqua-medic.de
Aqua-Teknik A/S	www.aqua-technik.com
Arie Blok Animal Nutrition	www.arielok.nl
Beresford	www.beresford.fr
Billings Productions, Inc	www.billingsproductions.com
Brogaarden	www.brogaarden.eu
Carl Stahl	www.carlstahl.com
Clax Italia	www.claxitalia.com
Crossborder Animal Services	www.crossborderanimalservices.com
Deerns	www.deerns.com
EKIPA	www.ekipa.nl
Fachjan	www.fachjan.nl
Fox Consulting	www.fox-zooconsulting.com
HMJ Design	www.hmj-design.dk
IC Eau SA	www.iceau.ch
KaGo & Hammerschmidt	www.felsen.de
Kiezebrink International	www.kiezebrink.eu
Lamartine Construction	www.lamartine-construction.com

Lionhouse	www.lionhouse.eu
Marine Nutrition	www.marinenutrition.com
Mazuri	www.mazuri.eu
Nieuwkoop Europe	www.nieuwkoop-europe.com
Pangea Rocks	www.pangea.dk
PGAV Destinations	www.pgav.com
PJA Architects	www.pjarchitects.com
Ralf Imagen y Comunicación S.L.	www.ralfnature.com
Rasbach Architekten	www.rasbacharchitekten.de
Ravensden	www.ravensden.co.uk
Ray Hole Architects	www.rayhole-architects.com
Rocas & Design	www.rocas-design.com
St Laurent	www.st-laurent.fr
TAA Group	www.taa-group.com
TVK ZooDesign	www.tvkzoodesign.nl
Zoological Adviser	www.zoologicaladviser.com
Zoologistics	www.zoologistics.nl
Zooprofs	www.zooprofs.com

NOTICEBOARD

Harry Schram 1960–2017

Dedicated environmentalist and educator

BY MYFANWY GRIFFITH, EAZA EXECUTIVE DIRECTOR



After a period of illness, Harry Schram sadly passed away on 23 March. Amongst his many other accomplishments, Harry was the Executive Director of EAZA between 2006–2008. During his time in office, he oversaw the development of the EAZA Executive Office into an entity separate from the Dutch Zoo Association (NVD) with whom they had previously been sharing addresses and resources. Harry's extensive experience in education also meant that this subject area was much raised in profile, including as part of member screenings. Harry's love of visiting zoos and aquariums was also evident, not only in his role as a rapporteur during many screenings, but also in his avid desire to visit as many institutions as possible. To our knowledge, he was well on the way to visiting 1,000 institutions and, even more impressively, could remember each and every one!

After his time as Executive Director, Harry stayed engaged with EAZA, contributing to various developments, presenting at the European Zoo

Educators Conferences, teaching for the EAZA Academy, and compiling the extensive 'Looking at People, Looking at Animals' international bibliography on visitor experience studies and exhibit evaluations. Harry started compiling this bibliography in 2008, and by the time the second edition was published in 2013, it contained well over 6,000 references. It is truly an excellent legacy

and resource for anyone wanting to find out what research has been carried out on the experiences of visitors to zoos and aquariums.

In addition to his experiences with EAZA, Harry also was a pioneer of the political party Groene Beweging (Agalev) and co-founder of Greenpeace Belgium. His interest in environmental conservation education led him to being the founder and manager of the EcoHuis in Antwerp; an immersive learning environment showcasing solutions for energy, water and material use to help people build and live in more eco-friendly homes. Harry also held positions on the Board of Directors for Natuurpunt Belgium and the Belgian Zoo Licensing Committee as well as being an Honorary City Councillor of Antwerp. From 2008 Harry worked as an educator for KMDA based at Antwerp Zoo. He was involved in various education and interpretation projects related to existing and new exhibits, including the Kalahari lion/meerkat exhibit at Antwerp and the Asian elephant exhibit and Indian village at Planckendael.

Harry's commitment to providing innovative learning experiences, combined with the inspiration he gained from the many, many institutions he visited, meant that he was always able to provide valuable insights into effective conservation education. His enthusiasm, knowledge and willingness to share the benefits of his experiences will be much missed.

BIG EAZA IMPACT AT THE ZOOS DIRECTIVE REFIT EVALUATION WORKSHOP

On 16 May the European Commission organised a stakeholder workshop on the REFIT evaluation of the Zoos Directive (1999/22/EC). The purpose of the workshop was to share the first findings of the evaluation and check with stakeholders if anything was missing or if they felt something needed to be corrected.

EAZA was represented by 29 people from 13 EU Member States, making us the largest delegation in the room. Other stakeholders represented were animal rights organisations and Member States. As a delegation we were very well prepared and we would like to thank everyone that was present at the workshop or helped beforehand by lobbying their Member State.

The response from the European Commission was that our views were clearly heard and that our position will be taken into account when they decide about the future of the directive. We would like to ask everyone to keep bringing up the process when they meet with their government and stress the importance of the directive. For more details please see the position paper on the EAZA website or feel free to contact EAZA's EU Policy Manager Daniel Nuijten at daniel.nuijten@eaza.net

Changing the future for endangered species

A NEW BOOK ANALYSES 10 SUCCESSFUL CONSERVATION PROJECTS TO CREATE A BLUEPRINT THAT COULD HELP COUNTLESS OTHER PROJECTS ACROSS THE WORLD

Dr Onnie Byers, Chair IUCN SSC Conservation Planning Specialist Group

With all the threats facing biodiversity, it can be easy for conservationists to become discouraged. Without question, there are serious challenges facing our planet. But there is good news. There are success stories. And research indicates that sharing positive progress and good news does inspire people to take action and change their behaviour for the benefit of the planet.

Over the past two years, the IUCN SSC Conservation Breeding Specialist Group (CBSG, now the Conservation Planning Specialist Group*) has undertaken to follow up on past species planning projects. We contacted people around the world with whom we have collaborated and who are still active in species conservation. We asked them if CBSG's expertise and planning processes positively impacted on the trajectory of a species' status over time, and whether the workshop had influenced any other conservation progress.

The result of our inquiries is a book called *Second Nature: Changing the Future for Endangered Species*, in which we share 10 examples of what can occur when dedicated people with diverse perspectives work towards a common purpose: to help a species survive. Each chapter tells the story of what happened when a government agency, zoo or other conservation organisation asked CBSG to help them overcome a problem they were having with their work to save a threatened species. Each faced different and very specific challenges, but they knew that CBSG's scientifically sound, consensus-based methods could help them to improve their results.

This collaborative approach is second nature to CBSG. It's in our DNA. It was the vision of Dr Ulysses S. Seal when he became CBSG's chair in 1979, and it informs every aspect of our work to this day. CBSG's principles of sound science,



Restoring a Homeland for Hungarian Meadow Vipers

To save the Hungarian meadow viper (*Viper ursinii rakosiensis*), Budapest Zoo partnered with Birdlife Hungary, government agencies and national parks to form the Hungarian Meadow Viper Conservation Centre after attending the CBSG workshop. Thanks to their efforts, more than 2,000 Hungarian meadow vipers have hatched at the breeding centre and hundreds have been released into reconstructed grasslands nearby.

neutral facilitation and commitment to collaboration and the transformative effect that they have on conservation efforts are shown throughout the book.

Not only are there direct, measurable improvements to populations in the wild and successful *ex situ* conservation projects to support them, but also the collaborators shared the many more intangible impacts fostered by the spirit of CBSG workshops, such as ongoing collaboration, official partnerships and greater understanding of the value of conservation, even among sceptics.

CBSG found great benefit in researching and writing these stories. Not only can *Second Nature* make clear to our partners, donors and

the public that CBSG's methods are effective for long-term improvements to species status, but also CBSG can use the insights gained from talking to collaborators many years after the workshop itself to understand what worked best for each unique situation. We can then use this information to innovate, adapt and continuously improve our work going forward.

But these success stories do not belong to CBSG alone. They also belong to the people around the world – local community members, scientists, researchers, government representatives, zoo and aquarium professionals and representatives of nongovernmental organisations – who played a critical role in the workshop and made sure the action plan was put into practice in the months and years that followed. They belong, too, to CBSG's generous and loyal donors, whose crucial support makes our work possible.

Second Nature is just a sample of the hundreds of stories we could tell of dedicated conservationists finding common ground, overcoming conflicts and developing creative, effective solutions that change the future for endangered species.

By bringing people together to address a shared goal, appreciating the value of collaboration and pushing for innovation, we do more than address challenges. We bring about second chances for wildlife and a more hopeful future for the planet.

*In June 2017, CBSG changed its name to the Conservation Planning Specialist Group (CPSG). See page 25 for more details. The book was published under CBSG. You can view the book at www.cpsg.org/blog/201704/announcing-cbsg-new-book-second-nature.



NEW ARRIVALS



MANED WOLVES BORN AT PAIGNTON ZOO

PAIGNTON ZOO has kept maned wolves (*Chrysocyon brachyurus*) since the early 1980s and has bred the species several times, but it is now seven years since the last occasion. The pair at the time had four pups, all of which were moved on to play their part in this carefully managed EEP.

This latest litter of three pups is the first for our current pair, a male who arrived in September 2016 from

Katowice Zoo in Poland as a one-year-old, and a female, who was born in December 2012 at Nordens Ark Zoo, Sweden and arrived in 2013. Tolock did not waste any time when he arrived and the couple were soon seen mating. Judging by the behaviour of the parents, the pups were born on 23 February, as the parents holed up immediately in one of their kennels and only the male was seen to emerge periodically to take

food back in. As is best practice with primiparous, and arguably all, carnivores, they were left undisturbed such that the pups were not actually seen by the keepers for another four weeks.

The maned wolf is the largest canid of South America. Adults stand almost 1 metre tall at the shoulder and weigh 20–25 kg. They catch small prey such as rodents, hares and birds, but fruit can also form part of an individual's diet. They are shy animals and would rather flee when alarmed, but if confronted they will raise their manes as a display of aggression, hence their name. Found in plains areas of Brazil, Paraguay and Bolivia, the maned wolf is an endangered species due largely to the interference of man through habitat destruction, poaching, roadkill incidents and interaction with domestic dogs, which are known to attack their more timid cousins and spread disease.

Like most maned wolves, our pair are elusive at the best of times; our visitors are more likely to smell them than see them given their particularly pungent aroma, but with patience they can usually be seen mid to late afternoon and at other quieter times of the day. It is now quite a treat to see this family of five 'foxes on stilts' (so called because of their long legs and coloration) when they come out to forage for food, with the youngsters gambolling about and attempting to carry large food items around in their mouths.

All things being well, we hope that the trio will be called upon to play their part in the breeding programme for this highly charismatic species.

AARDVARK SUCCESS CONTINUES AT BIOPARC VALENCIA

THE AARDVARK (*Orycteropus afer*) is a peculiar animal that is still widely unknown to the general public. It is the only species of the order *Tubulidentata*. It is a medium-sized insectivore that looks as if it was made from parts of other mammals.

At Bioparc Valencia, our aardvarks are housed during the day in cave-like dens with dimmed lighting, where they can be observed by the visitors. They usually sleep deeply all day, and even if they are quite solitary in their natural habitat, in

the zoo they like to lie next to each other.

In the evening they start being active, running around in the cave and waiting impatiently for their keeper to bring their dinner and, most of all, to open the gate to the outdoor enclosure, where the warthog family has been during the day. If the weather allows, the aardvarks spend the whole night outside, digging and sniffing and searching for real or imaginary insects.

Early in the morning they are ready to have breakfast and are tired enough to

go to sleep again in their den, after which the keepers plug all the deep holes and flatten the ground, preparing the enclosure for its diurnal inhabitants.

The breeding female is calm and tame enough to allow regular ultrasound examinations, so the date of birth can be predicted approximately. It usually happens around January or February. As the date approaches, the pregnant mother is separated from the rest of the group during the day. It takes several days for her to get used to this, but

TWO VIETNAMESE SIKA DEER BORN AT ZOO NEUNKIRCHEN



JAKUB HALUN

IN APRIL THIS YEAR two Vietnamese sika deer (*Cervus nippon pseudaxis*) were born at the Zoo Neunkirchen in western Germany. The fawns are probably male. Both mothers are three years old and from Ústí nad Labem Zoo in the Czech Republic. The father is nearly three years old and born at the Opel Zoo Kronberg in Germany. An adult sika deer reaches a body length of 140cm and weighs up to 80kg. The name comes from the word 'shika', which means 'deer' in Japanese.

At Zoo Neunkirchen the sika deers are living together with a small breeding group of Indian blackbucks in the 'Asiatic valley'. The blackbucks are Near

Threatened (NT). Because of hunting and habitat destruction the Vietnamese sika deer is most likely Extinct in the Wild (EW). There are only a few animals remaining in three Vietnamese national parks and some European and American zoos.

Zoo Neunkirchen is involved with the European Endangered Species Programme (EEP), which is coordinated by the Ostrava Zoo in Czech Republic, and thereby makes an active contribution to preserve this species. Together with other zoos, Zoo Neunkirchen intends to carry on breeding sika deer to make sure that this species will not become completely extinct.

eventually she accepts her new situation. After seven months of pregnancy, a new aardvark comes into the world.

Aardvarks are probably the ugliest and at the same time the cutest offspring in the zoo. There are big differences in personality among them, but from the start they all know what to do and where to find nourishment. Nevertheless, special care has to be taken to avoid the mother crushing the newborn unintentionally, and so at first

the mother and cub are watched over continually during the day. The female's calm nature even allows the keepers to check if she is producing milk and to help the cub to find the teats while the mother is peacefully sleeping.

For the first few weeks the cub is kept in a small padded and heated box during the night, with controlled temperature and humidity, while the mother is allowed to go out with the remaining adults. In the morning she goes back into her den and the keepers

bring the cub to her. Once the mother has recognised and thoroughly licked and stimulated the newborn, she falls asleep and the cub starts looking for its breakfast.

Aardvark cubs grow quite fast. Once they have reached a weight of around 20kg, they are gradually introduced to the rest of the family and very quickly learn their new routine. This year's cub was born on 28 January and we hope that there will be many more aardvark offspring in the future.



DIRECTORS' DAYS 2017

THE HIGHEST ATTENDANCE SO FAR HELPED TO MAKE THIS YEAR'S GATHERING A RESOUNDING SUCCESS

David Williams-Mitchell, EAZA Communications and Membership Manager

The annual Directors' Days took place from 25–28 April and was hosted by Chester Zoo at Chester Racecourse in the UK. Drawing in 125 delegates, this was the largest ever Directors' Days, fulfilling the aim outlined in the EAZA 2017–2020 Strategy to increase attendance.

The event started with an icebreaker event held at the racecourse's 1539 restaurant on 25 April, and continued with two days of meetings and a day set aside for visiting Chester Zoo; these meetings included the Spring Council meeting on 26 April and the Annual General Meeting, which was held on 27 April, following last year's change to a calendar yearly cycle.

Prior to the main event, Jon Paul Rodriguez, Chair of the IUCN Species Survival Commission (SSC), met with partner zoos from the EAZA network on 24 April to discuss further cooperation between our Members and SSC. EAZA's Executive Committee and the Membership and Ethics Committee also held their mid-year meetings on 25 April. Both of these meetings were highly productive and fed into the Spring Council and Annual General meetings over the next couple of days.

DAY 1: SETTING THE AGENDA

Wednesday kicked off with a keynote address by Jon Paul Rodriguez, who was appointed to the Chair of IUCN

SSC last year. Jon Paul introduced the knowledge products of the Commission, including the Red Lists for species and ecosystems, the Key Biodiversity Areas Standard, national Red Lists, People in Nature and more, stressing the ways in which each can contribute to conservation knowledge and implementation. He also introduced the strategic priorities for the Union for the period 2017–2020: increasing diversity across the SSC leadership (with a plan to include representation from all eight regions on the Steering Committee); continuity and strengthening of the Red List of species and the Specialist Groups; integrating *ex situ* conservation into the majority of SSC Specialist Groups, and the establishment of new partnerships with zoos and aquariums; the local application of SSC knowledge products and techniques; and, finally, the conservation priorities of the Commission over the next few years, incorporating both 'easy wins' and more complex projects.

Executive Director Myfanwy Griffith provided an overview of the EAZA Strategy 2017–2020 (available on the EAZA website), stressing the four focal areas, which are: maximising the conservation impact of EAZA and our Members; leading in zoo and aquarium animal management and care by maintaining healthy populations and individuals with positive animal welfare; representing the EAZA

community at the EU and with appropriate stakeholders to influence relevant policy and good practice; and communicating the values and scientific work of progressive zoos and aquariums both internally and externally. EAZA EU Policy Manager Daniel Nuijten followed this with a presentation explaining how zoo directors can play a strong role in advocacy at the EU and local levels.

EAZA was also delighted to welcome Alan Roberts and Andy McWilliam from the UK National Wildlife Crime Unit to discuss the role of zoos and aquariums in fighting the illegal trafficking of wildlife. Their presentation called on zoos to nominate individuals to ensure compliance with CITES and national law, to tighten up auditing and procedures and to form closer ties with law enforcement agencies to help prevent theft and other crimes.

The New Zoo Consortium's John Regan provided a fascinating thought exercise about the mutual support that zoos and aquariums and politicians can provide, pointing to a far larger role for our institutions in supporting and shaping national political agendas. Director of the German-speaking zoos association (VdZ) Volker Homes shared his experience of the implementation of the EU Regulation on Invasive Alien Species, and this was followed by Tiit Maran of Tallinn



(presented by Jane Hubbard, HR Director at Chester Zoo, and Steffen Straede, CEO of Copenhagen Zoo). All the presentations provided alternative viewpoints on leading zoo management and change.

The final session started with a presentation by former Chester Zoo Director Gordon McGregor Reid on the evolution of EAZA; how the model has changed in response to the complexities of the regulatory and media landscapes. This was followed by a presentation from EAZA Secretary Endre Papp on the decision-making processes of the Association, aimed at greater inclusivity. A final discussion looked at various issues that Members felt may become areas of contention in the future; these will be re-examined at greater length at a future meeting.

The gala dinner, held in the Racecourse Long Room, brought to a conclusion the discussions, and was followed on Friday morning by a visit for all delegates to the zoo, one of the leading institutions in the UK and Europe, and a regular and gracious host for EAZA activities, including Academy courses.

IN CONCLUSION

Keeping up with changing trends in the zoo and aquarium community is always a challenge, especially where the Association needs to formulate a common approach to strategic development and position statements. As always, EAZA Directors were highly engaged and proactive in the discussions and provided excellent analysis and guidance as the Association progresses into the new Strategy period to 2020. EAZA would like to thank all of the speakers who gave generously of their time, and to the Directors without whom EAZA could not operate. We would also like to thank the Chairs of the Committees who attended and provided their input and advice. Last, but by no means least, EAZA would like to thank Chester Zoo, especially Mark Pilgrim and Emma Powell, for their seamless and generous hosting of the event.

The next Directors' Days event will take place in Antwerp from 18–20 April 2018. We look forward to welcoming a strong roster of speakers and a record number of attending Directors next year!

Zoo showing how far we still have to go on controlling invasive alien species, using the example of the plight of the European mink.

The afternoon session focused on Collection Planning for Biodiversity Conservation and began with an overview of trends in EAZA animal populations over the past decade, presented by Danny de Man, EAZA's Collection Coordination and Conservation Manager. Onnie Beyers from the Conservation Planning Specialist Group presented on integrated conservation planning using the One Plan Approach, which was followed by a presentation of the new population management structure by EEP Committee chairman Bengt Holst (Copenhagen Zoo). The new CEO of Jersey Zoo, Lesley Dickie, discussed their forward-thinking approach towards institutional species collection planning, and Stephanie Sanderson, director of the European Association of Zoo and Wildlife Veterinarians (EAZWV) presented on the outcomes of the EAZA/EAZWV TB workshop, hosted by Paris Zoo, which is our first multidisciplinary approach towards developing cross-taxonomic disease management guidelines. The session ended with a video on a range of polar bear EEP transports, which was presented on behalf of Svetlana Akulova, CEO of Moscow Zoo.

EAZA Council met in the last

session of the day; a summary of the decisions made at this meeting can be found on page 5 of this issue.

DAY 2: INSPIRING FEEDBACK

Thursday morning began with the Annual General Meeting, the decisions from which can also be found on page 5. There was considerable discussion of the 2018 fee structure and the Membership and Ethics Committee recommendations.

The second session was a workshop held by EAZA Communications and Membership Manager David Williams-Mitchell and BIAZA Communications Manager Zoe Williamson on crisis communications. The workshop presented various scenarios for zoos and aquariums; not just for those directly implicated in a crisis, but also for those approached for comment by the media following a controversy at another Member zoo. The workshop yielded some interesting lessons, which will be incorporated into the final version of the EAZA Crisis Communications Manual for presentation to Council in September in Emmen.

The first session after lunch looked at the reinvention of Emmen Zoo as Wildlands Adventure Zoo (presented by Lisette de Ruigh, Operations Manager), the use of limited liability corporation status for municipally owned zoos (Radoslaw Ratajczszak, Wrocław Zoo) and leadership issues

What's in a name?

DURRELL'S CEO EXPLAINS WHY HER ORGANISATION RECLAIMED THE WORD 'ZOO' TO DEFINE ITS WORK AND IMPROVE ITS VISIBILITY

Dr Lesley Dickie, Chief Executive Officer, Durrell Wildlife Conservation Trust



To be or not to be a 'zoo'? That is the question.

Actually, that's not the true question. A zoo is what we have always been. However, in the mid-2000s we started to get cold feet about calling ourselves a zoo. We were worried about a variety of issues, not least a possible negative response from animal rights activists, who tar all zoological parks with the same brush. In addition there was a general feeling that some colleagues in other zoos were not working to very high standards when it came to conservation, and we might not want to be too closely connected with them.

We are, after all, a very small institution carrying out extensive conservation work, relying on the gate, trusts and grants and donations to make it all work. If we measure our work against the EAZA definitions of contribution to conservation, Durrell spends more than 33 per cent of its turnover on conservation. In addition, the Chief Executive at the time did not come from the zoo world and perhaps had no real attachment to the word 'zoo'.

Thus in 2006, we changed our name from Jersey Zoo to Durrell Wildlife Park. The larger Trust had already changed its name from the Jersey Wildlife Preservation Trust to the Durrell Wildlife Conservation Trust some time before. We had therefore removed every mention of the island of Jersey from our



name, be it at Trust or site level, as well as the word zoo. This followed a rebrand, when the dodo logo was introduced, which we recently refreshed.

When I took up my role as the Chief Executive Officer in October 2016, I had misgivings about our not being called a zoo from day one. It also proved to be confusing for visitors. In my first week at Durrell, I was walking around the site, talking to visitors and staff and seeing the animals, and found myself in the bat house, where I got talking to a couple who were having a great day. They explained how much they liked the bat house, how much it had changed what they thought of bats – not scary, but beautiful and important – and how much they loved visiting the zoo, and how much they would learn with every visit. Then they looked embarrassed – and apologised for using the word zoo.

This was not the only time in that first week that people said to me, 'Oh but we're not meant to call it

 A large green graphic with a stylized gorilla silhouette. The text 'GO WILD AT JERSEY ZOO' is written in white, bold, sans-serif font. Below the gorilla is the Durrell logo and the word 'DURRELL'. At the bottom right, there is a bus icon and the text '3, 4, 13 & 23' and 'www.jerseyzoo.org'.

GO
WILD
AT
JERSEY
ZOO

3, 4, 13 & 23 
www.jerseyzoo.org

a zoo, are we?' It seems that we had drummed into visitors the message 'Don't call us a zoo!' This struck me as a bizarre situation, where people who were our core supporters and enthusiastic proponents of our work were embarrassed or confused about what word to use. Wherever this arose, I reassured everyone that, no, it's absolutely fine to say zoo, because that is exactly what it is, and the general response was one of relief. On further investigation, it seemed to me that the staff were also overwhelmingly in favour of using the word zoo, but that they had also been instructed that it was an inappropriate word.

This is nonsensical for a number of reasons, the first and the most obvious of which is that we do run a zoo. We are, by all legal and non-legal definitions, a zoo; we are members of four different zoo organisations (BIAZA, EAZA, WAZA and Species 360); we rely upon partner zoos for the animals we care for here in Jersey, partner zoos that have over the years looked at Durrell's 'We are not a zoo' stance with either sadness,



I had also been canvassing opinion elsewhere. A proposal to revert to using 'zoo' in our visitor site name was supported by both the Minister of Tourism and Visit Jersey (the States of Jersey organisation that promotes tourism to the island). Indeed, in a meeting with the CEO and Head of Marketing of Visit Jersey, they expressed palpable relief that we might make this change. From focus groups conducted on the island we also found that, despite our road and entrance signs, residents on the island were confused about our current name. Was it just Durrell, Durrell Wildlife or Durrell Wildlife Park? If our current name was not resonating, a change to something more recognisable was clearly needed.

Whilst I believe that we should be proud of being a zoo, there is also an issue of visibility. Tourism to Jersey has significantly declined and severely affected our income. We also have a relatively low market share of leisure tourists to the island; a recent survey revealed that about one third of visitors leaving the island via the airport had never heard of Durrell and didn't even know that there was a zoo they could visit on Jersey. We are looking at increasing our visibility at the airport and harbour, and we believe that including 'zoo' in our name would make us more visible to potential visitors.

Therefore, on 6 March 2017, we formally announced that from 3 April 2017, we would revert to calling ourselves Jersey Zoo. Just as the Zoological Society of London has London Zoo and Whipsnade Zoo, and the North of England Zoological Society has Chester Zoo, Durrell Wildlife Conservation Trust will have Jersey Zoo – and we are proud of being a fabulous small zoo that punches above its weight in conservation and beyond.

amusement or, to some extent, annoyance. By implying to the public that zoo is a bad word, we were tacitly undermining our closest colleagues at other facilities – many of whom we collaborate with in fieldwork, science and training and breeding programmes.

It also quickly became clear to me that the island generally seemed confused or exasperated about the name change. There seemed to be a perception that we were perhaps 'aloof' and the refusal to be a 'zoo' appeared to be part of this problem.

In the past, several zoos had changed their name for fear of attracting unwanted attention from animal rights groups. But some are now changing back, including institutions such as the Bronx and Whipsnade. Paignton did not entirely drop the word zoo, but is

now putting it more front and centre. Colleagues at these institutions have indicated to me that they felt dropping the word zoo had been or would have been a mistake, and we believe we have nothing to fear from animal rights groups – we are strong enough to deal with them. It is on our work and standards that we will be judged by the outside world.



A global approach

ZOOQUARIA'S DAVID WILLIAMS-MITCHELL TALKS TO STEPHANIE SANDERSON ABOUT HER ROLE AS THE DIRECTOR OF EAZWV

DWM: Stephanie, you are the Director of the European Association of Zoo and Wildlife Veterinarians (EAZWV); can you tell us a little about how you decided to get involved with wildlife medicine?

SS: Well, it really depends how far back you want to go! My mother ran a leper colony for Dr Schweitzer in Gabon in the 1950s, and the local people used to bring her injured animals to treat. Her stories about those times inspired my interest in animals and wildlife and led me to go on to study veterinary medicine. My first jobs were in domestic animal practice but I kept my interest in wildlife alive by volunteering to treat sick and injured wildlife brought in to the practice by the RSPCA (Royal Society for the Prevention of Cruelty to Animals, the UK's largest animal welfare charity). I then decided to move into wildlife work full time and spent a year working at the RSPCA's wildlife hospital in Norfolk prior to doing my MSc in Wild Animal Health at ZSL. I became the first full time veterinarian at Chester Zoo in 1999 and moved into a zoo management a few years later, becoming Director of the Living Collection, and then of Science and Education. I set up my own consultancy in 2015 and took on the role of Executive Director of EAZWV at the beginning of last year.

DWM: You just came back from the Zoo and Wildlife Health Conference in Berlin that EAZWV co-organised with IZW. What were the outcomes of the conference?

SS: The conference was very well attended, and we've had really good feedback from the delegates. Both the scientific programme and the social programme were excellent; as EAZWV delegates know, a lot of our work is carried out through face-to-face networking at events like the conference, so it's important to provide space for those discussions.

The conference was also an ideal opportunity to launch our Strategy to 2021, focusing on how EAZWV can help vets help wildlife. We recognise that the role of zoo and wildlife vets is changing and that they need to move beyond treating individual animals and really become involved in looking at the bigger picture.

DWM: Could you explain how this works?

SS: To manage small populations effectively, we need to blur the boundaries between animals in zoos, in other 'human care' situations and in the wild. EAZWV is supporting vets to take a population-level viewpoint and to consider how the treatment of individuals in their care can best contribute to the physical, behavioural and genetic health of the species. Like the One Plan Approach for conservation, this is a multidisciplinary approach. Health has no borders, and we need to be working collaboratively across regions and disciplines and with key stakeholders, sharing knowledge and finding practical solutions.

Working more closely with EAZWV is a key step in developing this approach. In the past, our two organisations have worked in parallel on a number of issues and, given that our membership overlaps, this has sometimes led to confusion and duplication of effort. We are now combining our efforts and running four joint

EAZA/EAZWV working groups focusing on legislative matters pertaining to animal health, Veterinary Advisors to TAGs and EEPs, biological resources and data sharing, and management of infectious diseases. The last one is a particularly good example of how we can do our best work together. We ran a joint TB workshop in Paris last December, pulling together the EEP/TAG chairs of the key species affected, their vet advisors and TB researchers, to discuss how we best tackle this insidious disease. We are now working on a TB management manual that will help species managers, vets and keepers work together and follow a common approach.

DWM: You'll be holding a joint conference next year in Prague with your North American counterparts AAZV (American Association of Zoo Veterinarians). It sounds like EAZWV is really going for a global approach!

SS: Definitely. It will be a great opportunity to live our strategy and look at animal health across the regions, to find ways to combine knowledge, experience and data sets and to see how together we can achieve much more for the species in our care.

DWM: This is the first time that EAZWV has had an appointed (rather than volunteer) Director. Could you tell us why the Association decided to make this change?

SS: EAZWV has a 20-year history, and during most of that time the secretariat was run by Peter Dollinger, who as well as being a founder of the Association, very kindly provided his time and that of his staff to help administer the Association. When Peter retired, we decided to review our offering and push for a wider portfolio of services – which are all included in the new strategy. Like EAZWV, we've realised that we need to formalise the professional nature of EAZWV to reflect the changing landscape of zoos and conservation.

DWM: How do you see your role over the next few years?

SS: The Strategy points to some key areas that I would like to address. One burning ambition of mine is to make sure that every vet on the ground working with a managed species can access the information they need for maintaining the health of populations as well as individual animals. We have some great species and health management guidelines, but most vets on the ground are unaware of them and so are not contributing as effectively as they could to improving population health across the region. The way we are working collaboratively to develop a TB management manual targeted at species managers, curators and vets is a model for how this might be developed.

DWM: You're evidently very busy in your role; do you ever get any time off, and what do you like to do?

SS: I live in the Wirral peninsula in the northwest of England, which is a very beautiful part of the world. I am about to go and walk my dog on the beach, which is stunning, with views to Wales and some small islands just off the coast. It's a great way to relax, and my dog loves it!



Spreading the word



A HUGE RANGE OF CREATIVE AND INSPIRING EVENTS AT EAZA INSTITUTIONS CELEBRATED INTERNATIONAL BIODIVERSITY DAY 2017

Danielle de Jong, EAZA Biodiversity Communication Coordinator

The EAZA, BGCI and Ecsite Let It Grow campaign is a joint public engagement conservation campaign. This means that the campaign aims to raise awareness on local biodiversity and encourage citizens to get involved in ensuring that it is valued and protected.

Humans are currently the greatest threat to biodiversity everywhere. We put too much pressure on it by moving into cities, increasing urban areas, intensifying agriculture and not paying enough attention to the needs of nature and the services it provides for us. To help turn the fortunes of nature around, the Let It Grow campaign aims to reach its goals in three different ways:

Awareness – The first step of the campaign is to raise awareness amongst citizens of what biodiversity is. A 2010 study across the EU showed that fewer than half of Europeans questioned had heard of the term 'biodiversity'. A lack of knowledge about biodiversity and the consequences that our behaviour has upon it is the main reason for a lack of engagement in protecting it. By educating visitors, we can increase their awareness and help them to understand why having a full range of native species keeps ecosystems healthy for all forms of life, including humans.

Involvement – Once visitors understand what biodiversity means, the logical next step is to involve them

in supporting it. By helping citizens set up 'left spaces' on balconies, terraces, gardens and community spaces to give native species the chance to recover and thrive, we can give them a sense of accomplishment, as they quickly see that their actions have a direct impact. We have found that when people are involved in experiencing and measuring biodiversity, they feel that they can make a difference against all the 'bad news' of biodiversity decline.

Impact – Engaging people in conservation is a challenging and rewarding goal for most campaign participants. However, it is also important to emphasise that members of the Let It Grow coalition are in a unique position to reach millions of people from all walks of life. This reach makes campaign participants valuable partners for various governing organisations in implementing their plans and strategies towards biodiversity conservation.

International Day for Biological Diversity

A collective effort from campaign participants can demonstrate to political figures our worth by developing biodiversity awareness amongst millions of citizens across different communities. For 2017, this collective effort was held on 22 May, the International Day for Biological Diversity (IDB).

For IDB 2017, Let It Grow campaign

participants were encouraged to do what they could to celebrate this day with their visitors and community. As the participating institutions vary in size and means, each was given space to plan activities that would suit their institution. As 22 May was a Monday, participants were encouraged to include the weekend before as well, in order to reach out to a larger audience. In the weeks before IDB, campaign participants were invited to fill in a form indicating their plans for IDB. These plans could then be shared with the community to inspire one another. The results were indeed inspiring! Many campaign participants across the world held special activities and events to celebrate biodiversity and what it means to us. Below are a few examples:

MUSE Science Museum in Italy chose the International Biodiversity Day to inaugurate their new 'Garden of Italy', and organised workshops and activities such as 'Seed – the story of a small seed that wants to grow roots', a guided tour for children. In the meantime, more than 60 people of all ages took part in a Bioblitz to explore the biodiversity of the Lamar Lake, listening to the black owl and looking for bats, toads and traces of bears. This activity was organised in partnership with the nature reserve network of Monte Bondone.

Parque de las Ciencias in Spain also offered a special programme during these days. Tours through spaces with Mediterranean vegetation allowed visitors to recognise the value of their own heritage and the need to preserve it. On another scale, microorganisms also had their moment of glory in a guided space where visitors could learn about the life behind the process of making local products such as cheese or wine.

Furuviksparken in Sweden built a large insect hotel and explained to their guests what it was and why it was necessary. The hotel has been placed in a spot in the zoo where everyone will

The International Day for Biological Diversity (IDB)

In 1993, the Second Committee of the UN General Assembly created the International Day for Biological Diversity to increase understanding and awareness of biodiversity issues. The original date for this was 29 December, which was the day the Convention of Biological Diversity came into force. However, in December 2000, the UN General Assembly adopted 22 May as IDB, to commemorate the date on which a Conference for the Adoption of the Agreed Text of the Convention on Biological Diversity had been held in Nairobi, Kenya. This was where the text for the Convention and its conclusions were finalised in the Nairobi Final Act, on 22 May 1992. The change in date also made the planning and hosting of celebrations for IDB much easier, as the end of December coincides with many other holidays.



BIODIVERSITY DAY AT PARQUE DE LAS CIENCIAS



GREEN TEEN TEAM MEMBERS MAKING THE RECYCLING BOTTLES SEED PLAN



ARMADILLOS HELP OUT WITH TREE PLANTING AT PÉCS ZOO



BUILDING INSECT HOTELS WITH GUESTS IN FURUVIKSPARKEN

see it. Guests were also invited to make their own smaller versions of the hotel to take home with them.

In **Pécs Zoo in Hungary**, not only the guests took part in IDB activities, but also some of the residents. As part of the project, visitors could adopt and plant a tree, and the name of the adopting 'parent(s)' is displayed next to the tree. Additionally, as a thank you gift, the 'parents' were provided with a certificate, a one-time family ticket and a small gift. The zoo's two larger hairy armadillo joined in with the planting. Under supervision of their zookeepers, they started to dig the holes for the trees. The trees planted will be cared for by the gardeners of the zoo, and the plates with the name of parents and date of planting will be kept for years, so the visitors and adopting parents can keep track of how their tree is growing and developing.

Even halfway across the world from Europe, Let It Grow participants were

joining in the celebrations. **Botanic Gardens Jardim Botânico de Lajeado in Brazil** hosted an array of activities and workshops with topics related to local biodiversity, including build your own insect hotel, workshops on local mammals, dragonflies and mini-beasts and a BioBlitz. A total of 425 people attended, including many students and people from the community.

The Let It Grow biodiversity celebrations featured not just EAZA, BGCi and Ecsite members. The Green Teen Team is a foundation that aims to empower children to be able to make changes to their lives, the lives of others and the life of the planet by engaging children with nature via worldwide projects. In collaboration with Parco Natura Viva in Italy, Biosphaera, Farfalle Nella Testa, and Vivai Banterla, Green Teen Team members were able to engage in all sorts of biodiversity activities. They recycled plastic bottles into self-watering seed

planters; performed a Mini-Bioblitz in the GTT Activity area; planted olive, cherry, plum and peach trees, specially chosen to attract pollinators; and released a rehabilitated owl back into its natural habitat.

This is just a small overview of the many wonderful and creative initiatives taken to celebrate biodiversity. The great diversity of events made these days even more engaging. It also shows the incredible impact that can be had when more than 20 organisations work towards the same goal. Thank you to everyone who joined in!

The Let It Grow campaign is still in progress, so keep exploring the Let It Grow website and share your pictures and videos by using the #letitgrocampaign hashtag or by tagging us on Facebook and Instagram (@letitgrocampaign). Helping Europe's native species flourish is an ongoing task, so let's continue to Let It Grow!

A lesson in biodiversity



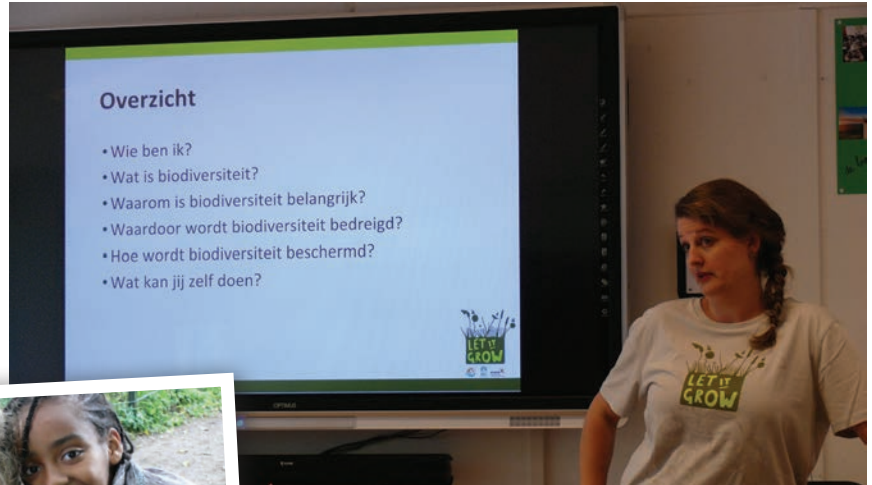
HOW A HANDS-ON SESSION HELPED A PRIMARY SCHOOL CLASS TO UNDERSTAND AND ENJOY THEIR ROLE IN SUPPORTING BIODIVERSITY

Danielle de Jong, EAZA Biodiversity Communication Coordinator

Raising awareness and engaging the public in a conservation campaign such as Let It Grow requires a lot of coordinating and organising of activities, and the institutions taking part are doing an excellent job of reaching out to their communities and the general public. Activities are being organised, local media is being involved, visitors are being engaged and biodiversity is being saved. For an example of some of the great initiatives being taken for the campaign, please read the article on page 16 about the festivities for the International Day for Biological Diversity.

However, while campaign participants are doing great work, public outreach and engagement occasionally falls to the campaign coordinator in the EAZA Executive Office. As the contact person for the campaign, I was approached by a primary school in Alkmaar, the Netherlands, who requested some information about activities involving the environment and what children might do in and around their own homes. Instead of simply sharing resources, we agreed that I would spend the morning teaching the class about ecosystems, biodiversity and local species as part of the Let It Grow campaign.

On 19 May, just before the International Day for Biological Diversity on 22 May, I spent a day at the school as a guest teacher. The class consisted of children aged from 10 to 12. This particular school sets class projects that last for about six weeks. The theme of their current project was 'A better environment starts with you,' a familiar Dutch slogan. As a communication coordinator, I don't mind public speaking or presenting to a group, but the group usually consists of my peers and not of preadolescent children. This became obvious in my slightly academic approach to



levels at which biodiversity can be explored, but after a few clumsy examples, including ticklish toads, the children started to understand what biodiversity is and why it is important for them. One girl told me that there used to be bumblebees living in a cavity in the brick wall of her house. One summer, she explained, there were no bees and the apple tree in the yard didn't produce any fruit. The children immediately understood the significance of this and were anxious to do things themselves to support biodiversity. I gave them a variety of ideas for simple things to do, such as admire animals from a distance when out for a walk, create pathways in the neighbourhood for animals to cross from yard to yard, save energy at home by turning off lights, and don't drop litter. I also gave them an assignment to create a 'left space' in their gardens at home.

After the theory lesson it was time for some practical activities. The teacher had found some old pallets and other building materials in the school shed, and the students had been asked to bring in flowerpots, sticks, hay, bamboo and so on from home. We

biodiversity and the explanation of the three different

took the materials to the schoolyard where we spent the afternoon building a giant insect hotel for the school. The children had a lot of fun doing this and very enthusiastically cut the bamboo down to smaller pieces, gathered stones and logs, filled the spaces with straw and even decorated the hotel roof with flowers. The insect hotel turned out very well and the children were quite proud of themselves. As I had spent the morning explaining the various threats to biodiversity, it was very good for the children to have this hands-on experience, as it proved they could actually do something to reduce those threats, and could go home with a positive outlook on conservation.

In June, Let It Grow will be on location again. I will be joining Gaia Zoo in the Netherlands for their second BioBlitz. Last year's edition was a great success (read about it in *Zooquaria* 96) and we're hoping this one will be as well. During the BioBlitz there will also be an information market comprising booths from the various NGOs that are collaborating with Gaia on the BioBlitz. I will have a booth highlighting which European species EAZA zoos are involved in protecting. Raising awareness and engaging the public seems more effective when the message is a positive one; and thanks to all the work EAZA zoos do, we have just that!

Saving the banteng

ACTION INDONESIA MAKES A PLEA FOR MORE MEMBERS TO JOIN THE BANTENG EEP

Johanna Rode-Margono, Chester Zoo/IUCN SSC Asian Wild Cattle Specialist Group

Action Indonesia is a new initiative organising the Global Species Management Plan (GSMP) for banteng, anoa and babirusa. This exciting collaborative effort combines the expertise of field and zoo professionals to save these flagship species. Action Indonesia is keen to involve more EAZA Members in the conservation of banteng by encouraging them to exhibit banteng in their institutions. Banteng are currently held in 13 EAZA institutions, but there is always room for more!

Banteng (*Bos javanicus*) is the wild form of the Bali cattle, a popular domestic cow breed with a population of 11 million, and exhibitors can capitalise on the banteng's familiar cow-like form to connect the domestic animals we know with their wild relatives. Banteng is a striking species, and including them in your collection would provide a focal point for Asian hoofstock exhibits. Banteng are more mild-tempered than other wild cattle and mix well with many species.

Exhibitors of banteng could also take the opportunity to share how reproductive technologies can help save species; work with banteng has included artificial insemination, embryo transfer and even cloning to resurrect a deceased individual whose genes were under-represented in the population.

HOW TO GET INVOLVED

A great way to integrate your collection with conservation in the wild is to support Action Indonesia and the Banteng GSMP. The Banteng GSMP aims to promote international collaboration to ensure the long-term survival of the banteng by:

- establishing a demographically and genetically sustainable and behaviourally competent global *ex situ* population as insurance for the wild;
- supporting the needs and goals of the regional Banteng *ex situ* programmes through collaboration and exchange of information and expertise;
- providing financial, technical, scientific and other expertise to support a range of *in situ* conservation activities including research, education, capacity building and conservation actions for Banteng; and
- promoting an effective interface between *ex situ* and *in situ* management that supports the conservation of Banteng, e.g. by supporting banteng rescue and reintroduction.

HOW CAN YOU HELP?

- Help build capacity at Indonesian zoos by providing workshop trainers or training materials.
- Enthuse visitors about banteng and banteng conservation by providing interesting facts and stories, and integrating them into your education activities.
- Get your education teams involved in producing awareness materials for Indonesian zoos or local communities living close to banteng.
- Initiate keepers' exchange with Indonesian zoos.
- Provide samples of your animals for genetic research.



Care and husbandry

EEP coordinator Tim Rowlands of Chester Zoo offers some useful notes on caring for banteng.

- **Housing:** Tolerant of high temperatures; can adapt to cold weather (inside temperatures should range between 10°C and 26°C).
- **Diet:** Primarily a grazer – feeds on grasses, sedges and forbs but will also consume fruit and browse, such as palm, bamboo and shrubs.
- **Social nature:** Gregarious and non-territorial. Typically housed as a harem group. Multiple males can be housed together.
- **Reproduction:** Year round; usually single calf; depending on situation and experience the bull may be separated prior to parturition or herd kept together.
- **Keeper resources:** Cleaning is simple – a quick shovel and go! Banteng are generally mellow and easy to work with – a keepers' favourite. Males can be a bit unpredictable and quick and have horns. Protected contact is recommended.
- **Mixed species:** Mix well with other ungulates, including various Asian deer, antelope, caprids and wild boar. Other successful mixes include macaques, gibbons, cranes, peafowl and waterfowl.
- **Medical notes:** Susceptible to Malignant Catarrhal Fever; do not house near wildebeest, sheep or other common carriers.

For the full husbandry guidelines, please go to www.azaungulates.org; or contact the EEP coordinator (see contact details at the end of this feature).

- Offer your marketing teams to help the GSMP team with disseminating information and promoting banteng conservation.
- Provide finances to support GSMP activities.

For more information, contact James Burton, IUCN SSC Asian Wild Cattle Specialist Group Chair: jamesaburton@yahoo.co.uk; or Tim Rowlands, Chester Zoo: t.rowlands@chesterzoo.org; +44 (0)1244 389720.

Planning for the long term

WHEN YOU NEED TO MAKE A LONG-TERM MANAGEMENT PLAN, EAZA CAN OFFER EXPERT HELP

Kristine Schad, Kristin Leus and Elmar Fienieg, Population Biologists, EAZA Executive Office

As population biologists, we are here to support EAZA's EEPs and ESBs by providing a framework in which you, as the subject matter experts, can do your best thinking and decision-making for your programme, whether it is within the old or new EAZA population management structure.

One activity that we can help with is the production of a Long-term Management Plan (LTMP), which is intended to include, but also be more than, population biological analyses and individual recommendations for social group moves, transfers and breeding. The LTMP is intended to design all those strategies needed to fulfil the chosen roles and goals of the EEP/ESB, which may include strategies in, for example, husbandry, socio-behavioural management, welfare science, reproductive management, veterinary protocols, needed research or data collection/monitoring, education, and conservation support not related to the actual population (e.g. targeted conservation education, in-kind support or training, equipment, skills, personnel time and fundraising). Producing such an integrated plan involves gathering and analysing a lot of data, information and expertise, and bringing together a group of experts and species specialists of varying backgrounds, who as a team make decisions for the species programme in question. The EAZA population management team can help with this process in a variety of ways and to varying degrees.

During the preparatory process, we can provide inspiration and assist the EEP/ESB in developing a step process, task assignment (among the programme/TAG members) and timeline to create produce the LTMP. Typically, the actual development of the LTMP, in effect a broad action plan for the EEP/ESB in question, involves a workshop with the EEP Coordinator or ESB Keeper, Species Committee, TAG representatives and other relevant programme advisors and experts. We can help with the workshop process design, group-thinking tools,



MAURITIUS PINK PIGEON
(*COLUMBA MAYERI*)

group discussion facilitation and many other such things.

In terms of population biology, we can provide whatever level of assistance is required or desired by the EEP/ESB. What the EEP/ESB in question feels comfortable with regarding the amount and type of help that we give with population analysis and individual (non)breeding and transfer recommendations is always discussed and agreed upon beforehand. For experienced coordinators with good population biology analytical skills, the emphasis might lie more on joint discussion of population analyses results and our assistance with workshop process design and group facilitation. For less experienced or less confident coordinators, the amount, type and level of help with population analysis and individual recommendations can increase or be modified as desired. Individual recommendations are also not an automatic component of all LTMPs. In cases where the EEP Coordinator and Species committee already routinely develop informed, population-wide recommendations at appropriate time intervals, there may be more of a need for in-depth discussion of long-term strategies or specific problems in the EEP/ESB. Furthermore, in those cases where an LTMP does include individual recommendations, these cannot cover the complete timespan of

the LTMP (typically around five years, but that depends on the biology of the species or the characteristics of the programme) and the EEP Coordinator/ESB Keeper is expected to keep making yearly recommendations (or in a time-step relevant for that species) until the new planning session comes along.

Finally, we can help to draft an LTMP document from these discussions and work with the EEP Coordinator/ESB Keeper to coordinate the process of approval of the document by the EEP/ESB, TAG, advisors, EEP participants and wider group of stakeholders (e.g. when external partners are involved).

The list below shows all the EEPs and ESBs we have so far assisted with LTMPs. Final reports are posted on the TAG pages of the Member Area of the EAZA website (and are denoted with *).

- Asian and African elephant EEPs*
- Giraffe EEP*
- Mauritius pink pigeon EEP*
- Polar bear EEP*
- Lion-tailed macaque EEP*
- African penguin EEP*
- Mountain chicken frog ESB (now an EEP)*
- Komodo dragon EEP
- Babirusa GSMP
- Anoa GSMP
- Banteng GSMP
- Chimpanzee EEP
- Eurasian lynx ESB* (*pictured*)
- Lar gibbon EEP*
- Dalmatian pelican EEP
- Musk ox EEP
- Wolverine EEP*
- Bottle-nosed dolphin EEP
- Persian leopard EEP

For further information, please contact elmar.fienieg@eaza.net.

Note: The publication of the Dalmatian pelican, Wolverine, Eurasian lynx, Persian leopard, Bottlenose dolphin and Musk ox LTMPs is supported by the European Union LIFE NGO funding programme. The EU is not responsible for the views displayed in those publications and/or in conjunction with the activities for which the grant is used.

A bright future for the Eurasian lynx

EURASIAN LYNX STUDBOOK KEEPERS REVIEW ITS PROGRESS AND MAKE A PLAN FOR ITS FUTURE

Lars Versteeg, former Eurasian lynx studbook keeper and curator at Safaripark Beekse Bergen; Jochen Lengger, current Eurasian lynx studbook keeper and Head of Animal Care Department at Zoo Schwerin; and Kristine Schad, Kristin Leus and Elmar Fienieg, Population Biologists, EAZA Executive Office

With a population of 400 Eurasian lynx (*Lynx lynx*) of several different subspecies, ongoing taxonomical discussions, hybrids, unknown ancestry and periodic reintroductions, the day-to-day management of the Eurasian lynx ESB can take a lot of work. For all these reasons, it is important that we take the time to make sure that we are moving in the right direction.

But what is the right direction? To answer this, we need to know why we want to keep a population of Eurasian lynx in our zoos in the first place. The Eurasian lynx ESB was started in 2002. In October 2016, the Eurasian lynx ESB discussion group re-examined this topic and decided that the main reason for keeping Eurasian lynx is its educational value as a European carnivore that is returning to many locations where it has been eradicated by humans in the past.

Another role of the ESB is to provide Northern lynx (*L. l. lynx*) and Carpathian lynx (*L. l. carpathicus*) for reintroduction, given that these reintroductions are done in accordance with the IUCN reintroduction guidelines. While Northern and Carpathian lynx are not threatened (IUCN, Von Arx 2007), Northern lynx from the ESB have already been used for reintroduction in Poland and Lithuania and such requests are expected to increase. In addition, Carpathian lynx from the ESB may be necessary for the much-needed genetic rescue of the reintroduced Vosges-Palatinian and Bohemian-Bavarian populations (Bull *et al.* 2016).

Reintroduction efforts are mainly organised by individual institutions. The ESB wants to become more actively involved with reintroduction efforts, to make sure that they are IUCN-endorsed and that all reintroduced lynx are purebred. The reason for this is simple; as a community we need to be responsible when it comes to reintroductions, and the studbook



keeper has the best overview of all hybridisation risks in the ESB population.

A challenge for the ESB is that many individuals in the population are hybrids or of unknown subspecies. Immediately after the establishment of the ESB in 2002, the decision was made to phase these individuals out, as they are not appropriate for reintroduction and compete for space with Northern and Carpathian lynx. The same was decided for the small Siberian lynx (*L. l. wardi* and *L. l. wrangeli*) populations in the ESB, which have too narrow a genetic base to build up a population with serious reintroduction potential. Due to the hard work of the studbook keeper and cooperation of the ESB participants, this phase-out population has decreased from 203 individuals in 2002 to only 114 individuals as of October 2016, freeing up ample institutional space for Northern and Carpathian lynx. The remaining phase-out population mainly consists of older animals, and the ESB will continue its phase-out strategy.

As of 10 October 2016, there were 164 Northern lynx (81 males and 83 females) and 124 Carpathian lynx (70 males and 54 females) in the ESB. Because there is only limited room left for the populations to grow, not all Northern and Carpathian lynx will be allowed to breed each year to avoid

surplus. Related to this, the ESB will also monitor the development of the Iberian lynx (*Lynx pardinus*) population in EAZA to avoid competition for institutional space.

In the past, wild-born Eurasian lynx that unfortunately could not be released back into the wild were offered to the ESB. The periodic addition of these potential founders has resulted in genetically healthy populations of both subspecies. There is a realistic possibility that this gene-flow into the ESB will no longer be possible due to changing regulations, which will make it much more challenging to keep the ESB population genetically healthy. Therefore, it is important to genetically manage the population to the best of our abilities. However, accurate genetic management in the Northern lynx ESB population is currently hindered by unknown ancestry. Molecular genetic analysis can help to improve this situation, but only if it involves analysis of a large part of the population. Such a study can be used immediately to investigate any remaining hybridisation risks. The ESB is looking for a research institution willing to take on this project.

If any EAZA Members are interested in learning more about this project, please go to the Eurasian lynx Long-term Management Plan on the TAG webpage on the EAZA Member Area.

Defying the poachers

WHY KOLMÅRDEN WILDLIFE PARK IS THE PERFECT TEST ARENA FOR ANTI-POACHING RESEARCH

Mats Amundin, senior advisor, Kolmården Wildlife Park; Tina Jansson, animal welfare coordinator, Kolmården Wildlife Park, and curator, Kolmården Fundraising Foundation; and Fredrik Gustafsson, Professor of Sensor Informatics, Linköping University

The east African countries are engaged in what seems to be a hopeless struggle against the well-organised poaching of rhinos and illegal trade in rhino horn, driven by a price per kilo higher than that of gold and cocaine and reaching an almost equal economic turnover on the black market.

Once, thousands of black rhinos (*Diceros bicornis*) roamed the 'Rhino Valley' in Tsavo West National Park. Today, fewer than 100 rhinos remain in the area, which is now called the Ngulia Rhino Sanctuary. To be able to protect the rhinos against poachers, the rangers in Ngulia Rhino sanctuary in Kenya need all the help they can get.

Kolmården Wildlife Park, together with Linköping University in Sweden, is now making an important contribution to saving these magnificent animals by developing a surveillance and communications system that will give the Ngulia rangers the upper hand in the war against the poachers.

The project was initiated in 2013 by the Stimson Center, a US-based international security think tank, which agreed with the Kenya Wildlife Service to start a pilot project on wildlife security. Linköping University was engaged as a technology partner, and since then more partners have joined the project, one of which is Kolmården Wildlife Park in Sweden. Kolmården's role is to offer a test arena for new surveillance and communications systems. The project's ultimate goal is not only to save the rhinos in Ngulia, but also to develop methods and technologies that can be applied to conservation efforts worldwide.

Professor Fredrik Gustafsson and his colleagues at Linköping University are experts on sensor informatics. Together with their partners they are exploring several different innovative ideas involving surveillance and communications technology. These include remote sensor systems, such as Doppler radar, TV and thermo cameras, microphone arrays and smartphone detectors, all aimed at detecting poachers and alerting the rangers.

BUILDING THE PLATFORM

The initial approach to the problem by Fredrik and his team was to go to Ngulia and talk to the rangers to find out how they worked and what tools they needed to deal with the threat from poachers. The conclusion that Fredrik's team drew was that the solution lay in communications; how could the rangers' observations be connected to the new sensor systems into one common communications platform and how could this information be made available in a clear and effective way? Fredrik and his team decided to build this platform on a smartphone application. They took the rangers' wishes into account and put a great deal of effort into training them to use the app effectively, and it is this bottom-up approach that distinguishes this project from other initiatives. Recently the rangers have been provided

with a second version of the app, which allows them to report intrusions in real-time to headquarters, so that the information is immediately available for counter-actions.

The app uses GPS to trace the rangers' foot patrols, ensuring that the area is fully surveyed. This function also improves the rangers' safety, as headquarters can keep track of exactly where they are at any given moment and provide targeted support in an emergency. The rangers also use the app to report animal observations, including newborns and the health status of individual rhinos, which makes the monitoring of the populations easier and more efficient.

REMOTE SURVEILLANCE

In parallel with the development of the smartphone app, new remote sensor systems that will be integrated into the platform are being developed and tested.

The anti-poaching surveillance in Ngulia today is entirely based on the foot patrols by the rangers. People on the ground will always be crucial, but the eyes and ears of the rangers can be supplemented by high-tech sensor systems. The project is therefore developing a remote watchtower system with a number of sensors, such as a microphone array, radar and a pan, tilt and zoom camera. However, no sensor system will provide a sustainable anti-poaching solution without a powerful user interface. The data from all the sensors are integrated into one composite situational picture which can be easily accessed via the smartphones in the field or from the Dashboard at headquarters. This function was part of the original design objectives. Deep-learning algorithms enable automatic classification of animals for monitoring purposes and for detecting anomalies in the scene, which would result in an alert being sent to the officer in charge. Security measures are in place to make sure that unauthorised access to this highly sensitive information is absolutely impossible.

A prototype of the remote watchtower will be mounted on the roof of the savannah lodge at Kolmården. It will survey the rhinos and the other animals in this exhibit and provide important data for the systems evaluation. The processed data will be presented live to the visitors, providing a powerful outreach tool for conservation. Kolmården has a well-developed infrastructure and a long history of conservation research and was ideally placed to act as a test-site for this project, which agrees perfectly with Kolmården's vision of a world that balances the needs of man and nature.

The remote watchtower will have a multi-microphone array system that can determine the precise location of sounds detected in the surroundings, e.g. a gun shot or a car engine. This can be used to automatically aim a camera and zoom in towards the sound source, allowing the officer at headquarters to evaluate whether or not it constitutes a threat to the rhinos.



TAGGING THE RHINO

One way to improve the protection of the rhinos might be to provide the animals with GPS tracking units. Knowing where the rhinos are relative to an intruder would enable more efficient counter-actions. However, it is important to make absolutely sure that the GPS data cannot be hacked by the poachers. Modern GPS systems are protected against such misuse, but the potential risk must always be kept in mind.

Normally GPS units are attached to a collar, but this does not work with rhinos' thick necks. A better option for them is an ankle bracelet. However, this is a more exposed placement, requiring a more robust casing for the GPS electronics and batteries. This is now being tested on the Kolmården rhinos, one of which, the female Namakula, has been trained to allow the keepers to put the bracelet on without sedation or immobilisation.

The possible wear on the skin is frequently checked and the information is used to make improvements. The durability of the bracelet most likely differs in a zoo setting compared to the wild, but durability testing in Kolmården was still deemed useful. Indeed, the first GPS casing lasted for

only a couple of months before it broke. Now a new, stronger casing has been developed, which will be tested during 2017.

If this were tested in the wild, removing the faulty collar would have required a large-scale, expensive and potentially risky operation to immobilise the rhino, and another immobilisation later on to put on a new bracelet with a stronger GPS casing. But this has been achieved much more easily and cheaply at Kolmården's test site.

The cameras in the remote watchtower can also be controlled by the GPS positions transmitted by the ankle bracelet, allowing the camera to automatically follow a tagged rhino. This has also been tested on Namakula and as well as testing the function, it makes a nice demonstration of the technology to the zoo's visitors via a TV screen in the savannah lodge.

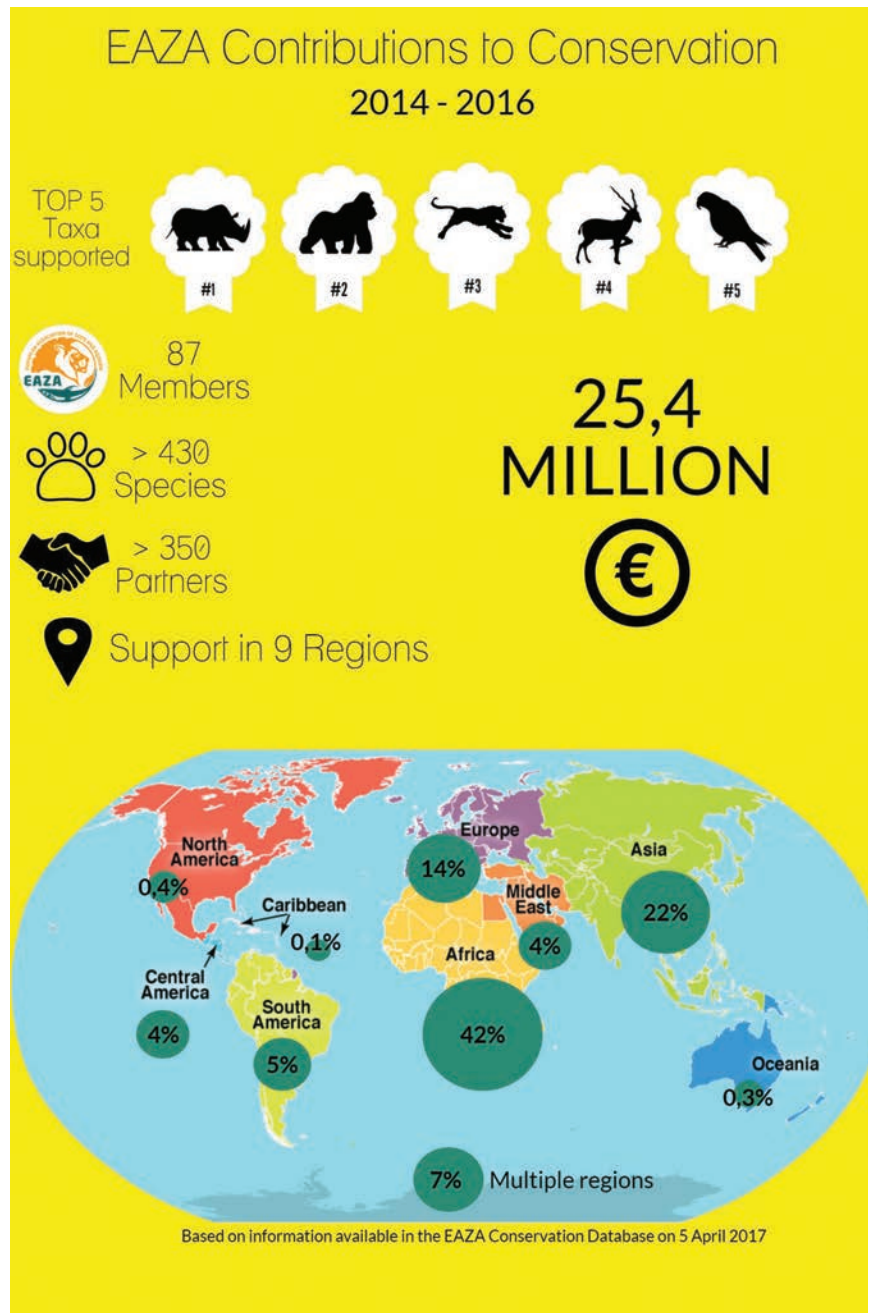
As a result of this research, Kolmården's rhinos and staff contribute substantially to the protection of rhinos and, maybe more importantly, to conservation through public awareness. When the project is completed, we hope that the Ngulia anti-poaching system will be adopted and used to save rhinos in other parts of the world.

CONSERVATION NOTICEBOARD

GLOBAL SUPPORT

Between 2014 and 2016, the contribution made by EAZA Members to conservation projects totalled an impressive €25.4 million. As the illustration (right) shows, this expenditure was spread across the globe, supporting 430 species in nine different regions, and reflects the exceptional effort that EAZA is making to protect and conserve a wide variety of threatened species.

Evidently, reporting on our conservation activities is a powerful tool for communications. This infographic generated nearly 30,000 views when posted on the EAZA Facebook page, and has been much discussed by the zoo community in Europe and beyond. Statistics such as these also help greatly when EAZA approaches stakeholders such as the European Union, IUCN and others, establishing our Association's credibility in the sphere of conservation both in the wild and in our institutions. It is worth noting that these statistics are based on data inputted by only 87 Members of EAZA; so these figures, while impressive, are not the whole story. We would therefore encourage every Member to put their conservation contributions into the database as soon as possible to ensure that we reflect accurately the fantastic work being done in conservation by all the Membership. If you have questions about entering your data, please contact Merel Zimmermann (email details at the bottom of the page).



EAZA CONSERVATION FORUM 2018



From 22–25 May 2018, Tallinn Zoo in Estonia will be hosting the next EAZA Conservation Forum. This platform offers the zoo and aquarium community, as well as the field conservation community, the opportunity to exchange experiences and build bridges. During this event we are looking to provide an interesting and diverse programme showcasing *ex situ* and *in situ* conservation stories and partnering opportunities. Some of the topics we intend to highlight are: innovative fundraising mechanisms, how to determine where to invest resources, reintroductions, wildlife trade, freshwater conservation and ways of connecting people to conservation. We also intend to pay special attention to conservation efforts in the Baltic region. More details about the programme, including how to register and how to contribute, will be made available through the EAZA website later this year. If you have questions or suggestions for the programme, please contact merel.zimmermann@eaza.net.

CPSG: new name, new mandate

AS WELL AS CHANGING ITS NAME, THE CONSERVATION PLANNING SPECIALIST GROUP HAS EXPANDED ITS MANDATE FOR THE FUTURE

Dr Onnie Byers, Chair IUCN SSC Conservation Planning Specialist Group (CPSG)

Since 1979, the Conservation Breeding Specialist Group (CBSG) and the global zoo and aquarium community have had a uniquely successful collaboration, helping to conserve threatened species. This close and effective partnership is more important now than ever before.

First created as the Captive Breeding Specialist Group, CBSG helped zoos and aquariums link their *ex situ* and *in situ* activities for conservation and provided tools to help them maintain genetically and demographically healthy populations. In 1994, CBSG's mandate grew to include providing expertise on management of small, *in situ* populations. To better reflect this evolution, CBSG changed the term 'Captive' to 'Conservation' in its title, while remaining focused on integrated species conservation planning for both *ex situ* and *in situ* populations.

Now CBSG is being asked to expand its mandate once again. Given the ongoing deterioration of the world's wildlife and wild places, species-conservation planning is crucial and the need to increase its scale and effectiveness is clear. Despite the International Union for Conservation of Nature Species Survival Commission's (IUCN SSC) long history of species-conservation planning, the current need far exceeds capacity.

Recognising the value of CBSG's inclusive and participatory planning processes and its community of experts in catalysing and guiding effective action for species, SSC Chair Jon Paul Rodriguez asked CBSG to lead a new initiative to greatly increase the SSC's conservation-planning effectiveness.

In recognition of this expanded mandate, and in consultation with the SSC Chair, CBSG decided to better align its name with its work and with the elevated role of the zoo and aquarium community in global species conservation. Thus in early June this year, the group changed its name to the

Conservation Planning Specialist Group (CPSG).

COMMUNITY SUPPORT

It is a huge honour for the CPSG network to be called upon to lead this work and to increase its scope and impact. It is able to accept because of the loyal and committed community, namely the zoos, aquariums, zoo associations and individuals that make up the Global Conservation Network (GCN, the group's fiduciary oversight body), which have helped to shape and support its evolution. This community, together with colleagues throughout SSC and IUCN, will rise to the challenge.

And the challenge is appropriately ambitious. The SSC believes that the status of species can be improved by conservation planning that supports governments and wider society to achieve biodiversity targets identified in international conventions. This includes the Convention on Biological Diversity Strategic Plan and the United Nations Sustainable Development Goals, both of which call for the loss of biodiversity to be halted.

CPSG has wasted no time since receiving its new mandate. It has already:

- surveyed Specialist Group chairs to determine their species-planning needs, priorities and expertise;
- expanded its membership to include many of the SSC's planning leaders;

- created an online, interactive inventory of recent SSC species-planning products;
- begun a directory of SSC planning experts available to assist fellow SGs;
- partnered with Newcastle University on a project designed to develop national guidance, processes and tools for meeting Aichi Target 12 of the Convention on Biological Diversity; and
- hired a Director of Training to increase species-planning capacity.

PLANNING FOR THE FUTURE

But this is only the start. CPSG, in collaboration with SSC taxonomic Specialist Groups, the IUCN Global Species Program, zoos and aquariums, governmental agencies and other partners, must develop processes and tools that make it possible to move more species more quickly from inventory through risk assessment to needs assessment, planning and implementation. CPSG will continue its intensive, single-species planning work and will increasingly devote resources to the development of multi-species and area-based planning approaches.

CPSG will retain its commitment to integrated species conservation planning (the One Plan Approach), its principles of collaboration, sound science and neutral facilitation, and its mission of saving threatened species by increasing the effectiveness of conservation efforts worldwide.

This change in responsibility could not happen without CPSG's integral association with the zoo and aquarium community. This collaboration and support remains essential. Only by working together can we change the future for endangered species. To learn more about CPSG, visit its website at www.cpsg.org.



ESSENTIAL TO THE SUCCESS OF CPSG ARE THEIR REGIONAL RESOURCE CENTRES. THE CPSG EUROPE RESOURCE CENTRE TEAM INCLUDES (ABOVE, FROM LEFT TO RIGHT) KRISTIN LEUS, BENGT HOLST (CONVENOR) AND FRANDS CARLSEN.



The underwater forest

WITHIN THE OCEANÁRIO DE LISBOA IS AN EXTRAORDINARY EXHIBIT THAT TAKES THE ART OF NATURE AQUARIUMS TO NEW HEIGHTS

Patrícia Filipe Alves Pereira, Head of Education, Communication and Sales Development, Oceanário de Lisboa

'Forests Underwater by Takashi Amano' at Oceanário de Lisboa opened in April 2015. This acclaimed, long-term temporary exhibition highlights tropical forests and the richness of their aquatic systems, through the largest 'nature aquarium' in the world.

Under the curatorship of Oceanário de Lisboa, the exhibition celebrates the simplicity and perfection – and imperfection – of nature and presents tropical forests in all their shifting beauty, offering visitors a sensory and emotional experience that transports them back to the origins of life.

The aquarium, the main element of the exhibition, was created by the acclaimed Japanese aquascaper, Takashi Amano, who sadly died in August 2015. His work sought to engage visitors in an unprecedented experience of contemplation and the conservation of nature in its purest state of balance.

In addition to the visual elements, the renowned musician Rodrigo Leão composed an original soundtrack especially for this exhibition – an ode to nature. The 13-minute suite is played by a string quartet in a masterful interpretation that offers visitors an experience of stillness and

simplicity, and is skilfully overlapped with the nature experience thanks to the work of a sound designer.

AN INSPIRING FRAMEWORK

The success of Oceanário de Lisboa depends on its ability to produce high-quality and unique temporary exhibitions that stand side-by-side with the stunning permanent exhibition, and which bring public engagement, encourage repeat visits and enable Oceanário de Lisboa to continue to share its conservation message with the general public.

Supporting the PIABA Project

In the context of this exhibition, Oceanário de Lisboa has been funding the PIABA project in the Rio Negro region (Amazon, Brazil) since 2015. The project's mission is to promote environmental and social sustainability when capturing and marketing ornamental fishes. By promoting this industry, the project helps to preserve the Amazon's tropical forests with the support of its residents, including a large number of tribes. Supporting this sustainable activity is important for keeping these communities focused on maintaining a healthy ecosystem and avoiding other activities, such as cutting down the trees, that will threaten the species that inhabit the Rio Negro area.

The Oceanário funding goes towards a programme that aims to 'train the trainers' best handling practices', which trains fishermen in capturing, transporting, acclimating and keeping ornamental fish to reduce the mortality rate throughout the process and to enhance the quality of marketed animals. In turn, these fishermen become trainers for other fishermen in their communities.

As a new core business of the institution, the creation and production of temporary exhibitions has to achieve the goals of innovation and uniqueness and have the ability to attract new audiences. This is accomplished partly by staff collaboration; that is, by involving staff from other 'worlds' in the temporary exhibitions team in each new exhibit, to enhance the knowledge and skills of the new team. We invite artists to bring original perspectives to each project, to strengthen the staff's creativity

and capacity to build an experience different from everything one has seen before. In turn, this helps to attract new audiences to the aquarium. Working with creative minds increases the feasibility of producing unique, high-quality exhibitions within a tight budget and timeframe. This is a lesson that we learned with the help of Lyn Heward from Cirque de Soleil, a consultant on the project.

To create our underwater forest, the Oceanário chose Takashi Amano, the creator of 'nature aquarium' art. We believed that by working with him, we would achieve innovation in the public aquarium world and attract many new 'target' visitors, chiefly aquarium hobbyists, Japanese culture followers and Zen- and music-lovers.

IMMERSED IN NATURE

The exhibition's concept is based on a return to nature. The public start by being symbolically displaced from their day-to-day, urban world to a universe where the environment and life mysteriously interconnect and relate to each other.

Nature aquariums are an art form where images of emerged tropical forests are skilfully submerged, presenting an aesthetic experience that does not intend to mimic the underwater world, but instead, as Mr Amano used to say, 'recreate the chaos of nature that transmits peace to humans'. It reveals these imagined ecosystems in all their beauty and offers a Zen experience, brimming with contemplation, quietness and simplicity. The aquarium also reflects traditional Japanese art, which strives to find beauty in simplicity. This space invites visitors to immerse themselves in their surroundings and accept imperfection, appreciating the beauty of what is not perfect but is natural – just like life.

Takashi Amano conceived the aquarium's interior design as a musical piece, with a specific beat and pace, where higher, shallow and cultivated areas alternate with deeper, open and sandy areas. Shaped as an inverted U, the aquarium's sides are about eight metres in length and its front is 24 metres long. The final composition depicts the author's interpretation of a river's cross-section, a large water system in the tropical forest. The sides

Forests Underwater – facts and figures

- The U-shaped aquarium holds 160,000 litres of fresh water and measures 40m long, 2.5m wide and 1.45m high.
- The layout of the aquarium includes 4 tonnes of sand, 25 tonnes of volcanic rock from the Azores and 78 tree trunks from Scotland and Malaysia.
- It contains 40 different species of tropical freshwater fish.
- It contains 46 species of aquatic plants.
- It required two years of planning and seven months of construction.
- It took one week to assemble the layout and plant the aquarium.
- More than 90 people of six nationalities participated in assembling the nature aquarium.
- 25 people from different parts of the world volunteered to work with and learn from Takashi Amano.
- It is the largest nature aquarium ever created by Takashi Amano.
- It is the first aquarium at the Oceanário de Lisboa to be signed by an author.

of the aquarium represent the river's banks and its central area represents the deepest area of the river.

The philosophy and aesthetics expressed in this exhibition are a vision of the world, an appeal for a lifestyle and a state of mind that emphasises 'finding beauty in imperfection' – in other words, recognising that the essence of happiness is in 'things as they are'.

A UNIQUE CHALLENGE

A 40-metre long nature aquarium of 160,000 cubic metres was something inconceivable before this temporary exhibition. The technical challenges of creating such an aquarium and the long-term difficulties of maintaining its quality level were assumed to be almost impossible to achieve.

With a permanent staff of three people completely dedicated to the maintenance of this aquarium, Oceanário de Lisboa has invested a great deal in making such a project a reality and a success, and over the last few years has acquired a unique knowledge of the difficulties of creating and maintaining large-volume nature aquariums.

Fortunately the investment and the risks taken to create something unique has proved to be a good decision. Since the opening in April 2015, the exhibition has been visited by 1,825,000 people from 180 nationalities around the world.

RECREATING NATURE

The master aquascaper Takashi Amano captured the magnificence

of the natural habitats to enable the public to experience up close its full beauty and to become involved in its preservation.

The recreation of a tropical forest landscape is achieved both by the spirit of devotion to nature and its interpretation through elements such as the tree trunks from Scotland and Malaysia, the golden sand, the volcanic rock of the Azores, and more than 10,000 small and coloured tropical fish and 40 species of plants.

Natural landscapes change over time, and this is represented in the aquarium. This is the great art of Takashi Amano; just as a natural landscape changes with the seasons or with the passing of time, the layout of the nature aquarium evolves with the growth of aquatic plants with ageing of the trunks and the wearing down of rocks. Amano himself explained this in early 2015:

'The layout that was first created will now drastically change. The plants will grow and proliferate. I have that image already designed in my head. And, imagining that evolution, there will be a completely different landscape from the current one. I expect that this will be the most fantastic layout I have created to date. And I am so glad I was able to place all the elements of nature in this aquarium.'

In August 2015, Takashi Amano sadly passed away. Oceanário de Lisboa pays tribute to Mr Amano and is humbled by the impact his art had on so many people, allowing them to have a higher appreciation for nature and its preservation.

A Parisian education

THE MOST RECENT EZE CONFERENCE TOOK PLACE IN PARIS, AND PROVIDED SOME INVALUABLE TOOLS FOR IMPROVING AND EXPANDING CONSERVATION EDUCATION

Laura Myers, EAZA Academy Manager

From 13–16 March, Parc Zoologique de Paris and L' Aquarium Tropical du Palais de la Porte Dorée played host to the latest European Zoo Educators (EZE) Conference. The conference was jointly organised by Paris Zoo, la Commission Française pour la Pédagogie Zoologique (CFPZ), and the Education Commission of l' Association Française des Parcs Zoologiques (AFdPZ). The conference was a sell-out, with 158 educators from across Europe and beyond participating across the four days of the conference. Thirty-four countries and 106 different institutions were represented, and this was the first EZE conference at which French was the most represented language.

The conference theme was 'Diverse tools to engage audiences with nature: how creative design sparks conservation education diversity in EAZA zoos and aquariums'. The theme was chosen to showcase the huge variety of tools and techniques that conservation educators use to connect with visitors to their institutions. Delegates shared their thoughts and experiences through a mixture of presentations, discussions and workshop sessions.

Ahead of the official conference opening, 41 participants attended the EAZA Academy pre-conference seminar on the theme of Conservation Storytelling. Facilitated by Peter Paul van Kempen and Frits Hesselink from frogleaps.org, participants explored the strategic elements of storytelling and developed their own skills to tell their stories more effectively.

After an entertaining icebreaker held at the zoo on Monday evening, the first full day of the conference kicked off at the Palais de la Porte Dorée with a warm welcome from all of the hosts and organisers. This was followed by a keynote speech from Susan Clayton, professor of psychology and Chair of Environmental Studies at the College of Wooster, Ohio. A self-described conservation psychologist,



DELEGATES AT A CONFERENCE SESSION

she shared details of her zoo-based research investigating the social aspects of zoo visits and the influence of social contexts on concerns about the environment.

The day continued with presentation sessions on the themes of Arts and Culture in EAZA Zoos and Aquariums, Conservation Storytelling, and Engaging with Groups with Additional Needs at the Zoo. Christiane Herth from the International Society of Education through Art (InSEA) and conservation storyteller Marie Whitehead delivered session keynotes which challenged delegates to consider their work through a more creative lens, rather than as strictly scientific or educational. The sessions included a number of very innovative presentations from EAZA Members showcasing examples of good practice, including a theatrical experience from Moscow Zoo and an example of how Frankfurt Zoo is improving social engagement for migrants.

The afternoon also featured a presentation from EAZA Communication Committee chair Colomba de la Panouse, who highlighted the importance of good communication across the EAZA membership and the role that educators can play. Her talk was especially poignant following the tragic poaching

incident at Parc Zoologique de Thoiry.

The day closed with a presentation from Cathriona Hickey (ZSL) who shared ideas on how to engage in reflective practice and how educators can continuously improve and develop their performance and programmes. Underpinning all the education work in zoos is the need for continuous reflection, evaluation and improvement – a point emphasised in the new EAZA Conservation Education Standards. It was appropriate to end the day with some great suggestions of techniques to facilitate this.

After a busy day of presentations, delegates got to experience some French culture. With a little help from some animal puppets, the local organisers managed to take more than 150 delegates across Paris on public transport for a cruise on the Seine. They even kept everybody well supplied with cheese and wine during the trip for a truly authentic experience.

The conference continued on Wednesday with a morning session on engaging with visitors beyond the zoo and aquarium, whether through outreach techniques or through the use of new technologies to interact with visitors. Education is a key focus for EAZA Members, and our educators



DANCING FEEDBACK FROM WORKSHOP PARTICIPANTS

are constantly working to extend their reach as far as possible. Zoos can play a huge role in reaching audiences that don't respond to more traditional methods of learning, but equally it's important for zoos to reach out to new audiences and engage with people who might not normally visit zoos.

Eco-ethologist Myriam Baran gave an entertaining keynote speech about the different engagement techniques used in her TV show *Curieuse de Nature*. Presentations ranged from the use of the Wildlife Witness app to engage visitors with the issue of illegal wildlife trade at Chester Zoo to connecting urban and rural schoolchildren to learn about local biodiversity at Mulhouse Zoo. Tiago Carrilho (Lisbon Zoo) challenged all the delegates to share their outreach adventures using #zooontheroad. The morning's presentations finished with a thought-provoking talk from João Neves (Zoomarine Portugal) sharing his research into the impact of gender stereotyping on conservation messages.

The day continued with guided tours of Paris Zoo or the option to visit the aquarium. The zoo tour gave delegates the chance to experience the educational potential of the newly refurbished and redesigned zoo. Luckily the weather was very favourable for March in Paris, so delegates were able to take advantage of a sunny day to enjoy visiting the zoo.

The final activity for the day was a series of interactive workshops. The

topics covered were education strategy development, the use of dissection as an educational tool, engaging younger children with biodiversity, integrating technology into conservation education, developing collaborative learning, finding ways to make education entertaining, and how to improve provision for learners with special educational needs and disabilities.

The workshops provided a great opportunity for participants to come together in smaller groups for discussion and networking. It was also a chance to engage in some more innovative activities, ranging from creating a concept and education strategy for an imaginary zoo to remotely participating in a live education session at Lisbon Zoo.

The final day of the conference started with some feedback from the previous day's workshops, so that everybody could have some insight into the discussions. The 'Education and Entertainment' workshop participants elected to give their feedback in the form of a dance, ably led by workshop facilitator Guillaume Picard (Le Pal).

The first presentation session focused on promoting biological literacy, often seen as the traditional role of zoo education. Guillaume Lecointre (Musée National de l'Histoire Naturelle) gave a passionate keynote speech describing the role that zoos can play in defending the teaching of science and evolution, and the other

presentations in the session showcased some original ways of approaching science education in zoos.

The final session for the morning focused on local biodiversity and campaigns, laying the groundwork for EAZA campaign updates later in the day. Yvan Tariel (Ligue pour la Protection des Oiseaux) delivered an interesting keynote speech that revealed some of the challenges zoos can face when developing partnerships with other conservation organisations. The other presentations highlighted not only the range of biodiversity across Europe but also the many ways in which we can engage zoo visitors with the natural world around them. It was encouraging to hear about many positive partnerships, ranging from the cooperation between Parco Natura Viva and a local science museum to the collaborative efforts of the AfdPZ to promote the Pole to Pole campaign.

The final afternoon of the conference started with an Open Space session. Delegates were able to suggest discussion topics throughout the conference, and broke out into smaller groups to talk in more depth about issues that were important to them. Topics ranged from how to discuss difficult and challenging subjects with visitors to how to make future conferences more sustainable. The feedback at the end provided plenty of food for thought and ideas to develop further at the next conference.

The last objective of the day was to update participants on EAZA Conservation Campaigns. This included an update from the ongoing Let it Grow campaign, together with a rallying call for educators to keep informing EAZA about all the activities they are carrying out for the campaign. This was followed by an introduction to the new Silent Forest campaign and some lively discussion about how educators can help to deliver the campaign objectives.

All of the different organisers and hosts did a wonderful job in putting the conference together, and gave us a truly excellent example of the power of cooperation, delivering a great few days packed with information and inspiration. We're already looking forward to the next conference in 2019, and our next hosts will have a lot to live up to!

Protesting too much?

IN AN ERA OF ONLINE PETITIONS AND SLACKTIVISM, ZOOS NEED TO KNOW WHETHER AND WHEN TO PAY ATTENTION TO THE PROTESTORS

David Williams-Mitchell, EAZA Communications and Membership Manager

EAZA Members will be increasingly familiar with the phenomenon of online petitions; whether calling for zoos to be shut down or for a specific animal to be transferred to a sanctuary, petition sites have never been busier with public calls for change. Online petitions are touted by their host websites as highly effective, and the numbers of people signing them can seem daunting; if you have received a petition with hundreds of thousands of signatures, it can seem as though failing to respond to the petitioners' demands is a short cut to business failure. On the other hand, there's a huge body of literature that suggests that online petitions are about as effective as the paper they're written on. The truth, as ever, is complicated, and lies somewhere in between.

CAMPAIGN-BUILDING

Dr Dave Karpf of George Washington University in the US identifies online petitioning as an early-stage tactic in a wider portfolio of activism, and one that may not actually be intended to force the demanded change¹. He posits that petitions are intended to build a broader campaign, recruiting new and previously uncommitted people to a cause. They are intended not only to send a message to a decision-maker and tell the media that there is public interest in a story, but also to build a mailing list and get people to commit to more concrete action.

However, this approach is effective only where the demand is for a specific and realistic change by a specific person or organisation. Calling on the President of WAZA to shut down all zoos is not only beyond even her high level of capability, but is also a demand that only a minority would support. Any momentum built for such

a campaign would dissipate as soon as the petitioners realised that there was no chance of such a demand being met.

Accuracy is also important – but is often absent. EAZA is currently subject to a petition for the transfer of



Tanya (pictured above), an elephant with a complex history that is housed at our Candidate for Membership Zoo Tîrgu-Mure in Romania. The petition has never been closed and has, in the last three years or so, gained nearly half a million signatures calling for the 'solitary' elephant to be moved out of conditions that are depicted as cruel and inhuman. EAZA has repeatedly contacted the host, Care2.com, to put the record straight and explain that Tanya shares her enclosure with another elderly cow, following a long and sometimes difficult acclimation process. The petition, however, rumbles on, despite the fact that we can demonstrate easily that the conditions described do not exist.

An effective petition then, needs to be both accurate and realistic, and few petitions against zoos jump even these low hurdles. If there is an urgent need for change at your institution, the chances are that you already know, and are taking demonstrable steps to rectify the problem. Volunteering for an EAZA Accreditation Programme (EAP) screening can help you identify issues that you may have missed, and help you avoid the need for

reactive change following an effective petitioning campaign.

WHAT ARE PETITIONS FOR?

If we accept that the petition is not the end-game, it is worth also looking at the supplementary aims – to build mailing lists and inspire 'real world' action. When someone signs a petition, it gets them on to a mailing list and makes them a 'member' of the petitioning organisation, allowing it to claim that it has a larger number of real activists than it actually has. Experts in the field of online social change recognise that converting these mailing lists into a coherent campaign is extremely challenging, with many signatories not even remembering the last petition they put their name to, and ignoring or unsubscribing from the mailing list. It's a very long way from signing a petition to playing an active role in an organised campaign, and the motivations for signing range from an active interest in that organisation or in a specific protest to an expression of 'Isn't that awful?'²

In summary, Members should review carefully any petition that targets them – and not panic. If it is inaccurate, you should be active in pointing this out to those who sign the petition, the site that is hosting it, and any media who make enquiries. If it is not inaccurate, and the demand is achievable, it might be worth thinking about making the change. However, as usual, the most effective defence is to minimise the chances of being targeted in the first place by carrying out active and regular reviews of the zoo's vulnerabilities, and working (with EAZA where appropriate) to correct them before a petition starts.

² Google Civic Innovation Team: *Understanding America's Interested Bystander: a complicated relationship with civic duty* 2014

¹ Cited in *Billmoyers.com*, Sept 2016 Article Gail Ablow



*Some passengers need a
special travel agency*

**ZOO
LOGISTICS**

Amsterdam Airport
ZooLogistics BV
Hoeksteen 155
2132 MX Hoofddorp
info@zoologistics.com
www.zoologistics.com
+31 (0)20 / 31 65 090



**ANIMAL
LOGISTICS**

Frankfurt Airport
AnimalLogistics FRA GmbH
Langer Kornweg 34 K
65451 Kelsterbach
michael@animallogistics.de
www.animallogistics.de
+49 (0)6107 / 40 779 -21



*Leading
the way*

MazuriTM
Zoo Foods

Email: info@mazurizoofoods.com Tel: +44 (0) 1376 511260 Fax: +44 (0) 1376 511247
www.mazuri.eu