



**WAZA**

*World Association  
of Zoos and Aquariums*

2020

01

WAZA Conference



# NEWS

Recap of 74<sup>th</sup> WAZA  
Annual Conference

Abu Dhabi Call for Global  
Species Conservation Action



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*World Association  
of Zoos and Aquariums*

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**Cover Photo:** Arabian oryx, one of the  
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## WAZA Membership

**WAZA members as of 14 January 2020**

Affiliates	10
Associations	24
Corporates	18
Institutions	281

## Future Events

**2020:** WAZA/IZE Annual Conference, San Diego Zoo, San  
Diego, USA 11-15 October

**2021:** Moscow Zoo, Moscow, Russia

**2022:** Loro Parque, Tenerife, Spain

# President's Letter

## Prof Theo B. Pagel

*President of WAZA*

Dear colleagues,

We are living in a challenging world where leaders like Greta Thunberg gain more coverage from the public media and politicians than scientific experts in their field. Depending on the situation this may be harmless, but it can also be a cause for concern, as facts can be distorted or inaccurate.

WAZA members are the leaders and experts in the management of keeping and breeding wild animals, their husbandry, and in educating the public about their biology and situation in the wild. WAZA also plays an integral role as a research active organisation across a diversity of research sectors to ensure effective conservation strategies are implemented.

We as WAZA representatives, the leading global zoos and aquariums, need not only to communicate and cooperate with each other, but also to address a much wider audience. It is becoming increasingly imperative to inform the general public, media and politicians about our unique expertise. Zoos and aquariums have an essential role to play in the modern world, in responding to and taking action on ongoing environmental crises, such as climate change and biodiversity loss. WAZA has to underline its importance and should be recognised as one of the leading global players in conservation and environmental education. Governmental bodies need to view WAZA and its members as playing a crucial role in encouraging human behaviour change.

Zoo-led conservation, education and research are important parts of the holistic conservation one-plan approach. To reach a larger audience, we need to open ourselves and find controlled and successful ways to cooperate with parties across different sectors.

We need to collaborate with botanical gardens, natural history museums, universities and governmental bodies on a greater scale than we have done in the past. Zoos and aquariums already play an important influencer role, and our



role will become even more vital in the future. In 2020 we have several opportunities to step forward – and we should not miss our chance. In the year ahead WAZA will deepen the relationships with our current stakeholders, but also establish new connections with the outside world. We will be present and provide input at the important world conferences, such as the International Union for the Conservation of Nature (IUCN) World Conservation Congress in Marseille, or the Convention on Biological Diversity Conference of Parties (CBD CoP) in China.

WAZA will be the coordinator and representative of the scientific-run zoos and aquariums, working closely with our members, member associations and partners like Species360 and the IUCN Species Survival Commission (SSC) including the Conservation Planning Specialist Group (CPSG). Global management, especially globally managed animal species programmes will become increasingly more relevant.

In 2020, we will focus on a lot of challenges, but together our community will succeed with its mission and vision, together for conservation.

I wish you all a Happy New Year and all the best for 2020.

**Prof Theo B. Pagel**



# Q+A with the new WAZA president

**Prof Theo Pagel officially assumed the role of WAZA President at the Annual General Meeting of the 74<sup>th</sup> WAZA Annual Conference in November 2019 and will serve a two-year term as President.**



Photo: Prof Theo Pagel and an okapi. © Cologne Zoo

## **Please tell us a little about yourself.**

I have a great love, passion and interest in animals. Since my early childhood I knew I wanted to be a zoo director. Later on, the desire to work for the conservation of species; educating people to encourage their interest in animals, and increase scientific research about animals, are the reasons why I ended up working in the zoo community after I completed my studies in biology and geography at the University of Düsseldorf.

I worked for 16 years as a curator at Cologne Zoo before becoming the CEO in 2012. From 2013 - 2016 I served as President of the Verband der Zoologischen Gärten (VdZ) and served on the Species360 Board. In both positions I worked together with other board members as part of the restructure processes. I have been a member of the European Endangered Species Programme (EEP) Committee since 2007, and a member of the EAZA and WAZA Councils since 2013 and 2015 respectively. I also play an active role in the

Conservation Planning Specialist Group (CPSG) and the IUCN Asian Elephant Specialist Group. Cologne Zoo, which turns 160 years old next year, is a member of all these organisations and we are fully convinced of the value of the One Plan Approach (OPA) to conservation. We run several conservation projects around the world and participate in over 150 different breeding programmes.

## **How do you feel about being the new President of WAZA?**

I am extremely excited and honoured to be elected as the President of WAZA. The presidency is both an honour and an obligation to me. I look forward to working closely with the WAZA Executive Office, the new Council and the WAZA members for the future of zoos and aquariums. Together with my colleagues on the Council, I will strive to help ensure we can further develop our important roles in the conservation of species and biodiversity, education, and to advance the research potential of zoos and aquariums.

I am also proud to be the third President of WAZA who comes from Cologne, Germany. Dr Wilhelm Windecker was President of the International Union of Directors of Zoological Gardens (IUDZG) from 1968 - 1970 and Prof Dr Gunther Nogge, my predecessor, was President in the years 1994 - 1995. This demonstrates that Cologne Zoo has always been active on an international level and has supported the further development of zoos and aquariums.

## **What are your impressions from the 74th WAZA Annual Conference in Buenos Aires?**

We recently held our successful 74th WAZA Annual Conference in Buenos Aires, Argentina and I would again like to thank our host Fundación Temaikèn for organising the event.

**“We live in a global world and therefore we need WAZA to act as our global voice.”**

Prof Theo Pagel



**Together  
for nature**

**Photo:** Prof Theo Pagel addressing WAZA Members at the 74<sup>th</sup> WAZA Annual Conference. © WAZA

At the conference, we agreed on the new WAZA Bylaws, and following the recent members' and non-members' surveys, we were able to discuss the expectations of our members and potential members as well as the future of WAZA. A big thank you to all who attended the meeting and added valuable insights to our internal discussion. And of course, I have to thank all of the colleagues who took the time to answer the questionnaire.

Kris Vehrs, former long-term representative of the Association of Zoos and Aquariums (AZA) received the highest honour WAZA can offer, the Heini Hediger Award. Herewith, I would like to once again congratulate Kris on this well-deserved honour for everything she has done for the zoo community.

It was enriching to meet with so many colleagues and friends, to listen and learn from the leaders of our global community.

### **What are the next steps for WAZA internally?**

Firstly, we will start our search for a new CEO. We need a person who will help us progress our development, therefore, we are looking for a passionate and knowledgeable person. Together we will restructure our work based on the

findings and results of the last WAZA conference to find synergies and create strong alliances to reach our goals.

We have to understand that although WAZA and its members are a strong player in conservation and education, ultimately WAZA is a membership organisation. My hope is that we can clearly demonstrate the value WAZA provides for its members. Our aim is to understand how we can serve our members in the most effective way possible.

Our work and the mission of zoos and aquariums, is so complex that it is not enough to have professional national and regional associations. We live in a global world and therefore we need WAZA to act as our global voice. As one of my predecessors, Jörg Junhold, once said, “playing globally and managing regionally.” And today, almost every modern and scientifically-run zoo lives and uses the WAZA World Zoo and Aquarium Conservation Strategy, our Animal Welfare Strategy and other products from the WAZA think-tank.

In following the One Plan Approach we should try to get more reputable zoos and aquariums to join WAZA. We need more good zoos, not less!



**“It is essential for WAZA to be recognised as the voice and umbrella organisation of a global community of high-standard zoos and aquariums.”**

Prof Theo Pagel

**Photo:** Prof Theo Pagel and Dr Jenny Gray presenting Kris Vehrs with the Heini Hediger Award © WAZA

The more established scientific zoos and aquariums that are onboard as WAZA members, the more species we can effectively manage and ultimately reach a larger audience to achieve our goals.

And of course, we need to continue with the improvement of our institutions across all the different sectors we work in.

### **What do you see for the future of zoos and aquariums?**

Our main focus and our expertise is in animals. No other profession has this type of expertise, it is truly unique.

WAZA and its members are working as recognised partners in the conservation world – cooperating with NGOs such as the IUCN, World Wildlife Fund (WWF), Fauna and Flora International (FFI), TRAFFIC or governmental authorities like the Federal Agency for Nature Conservation (BfN) and the United States Fish and Wildlife Service (USFWS).

Modern, scientific zoos and aquariums – like our WAZA members – are already on track as conservation and education centres. We just have to continue to further develop the work that has been done so far. We need to be the global voice of species together with our partners like the IUCN.

### **What are the next steps for WAZA externally?**

2020 is the year that the UN decade of Biodiversity ends. Important conferences like the IUCN World Conservation Congress and the UN Biodiversity Conference (CBD CoP) will be held. All conservationists and even all societies are waiting anxiously to see what will happen post-2020. We need to set the course. WAZA wants to contribute to and be part of the necessary changes, therefore we will participate in these conferences. We not only want to raise our flag, but also to actively contribute to the conservation of biodiversity.

It is essential for WAZA to be recognised as the voice and umbrella organisation of a global community of high-standard zoos and aquariums.

We have already started to cooperate with the youth of this planet, and we need to ensure we continue working and cooperating with them to change the planet for the better.



# Reflections on the Challenges and Opportunities for Zoos and Aquariums



Photo: Dr Jenny Gray © Zoos Victoria

## Dr Jenny Gray

*CEO Zoos Victoria, Australia, and WAZA Immediate Past President*

It has been a great honour to serve as the President of the World Association of Zoos and Aquariums over the last two and a half years. In this time, I have visited 21 zoos and aquariums, attended four regional conferences and presided over three WAZA Annual Conferences in Berlin, Bangkok and Buenos Aires. I have listened to many members' inspirational stories, discussed and debated the future of zoos and aquariums and posed for too many pictures.

After serving as the President of WAZA, representing such a rapidly evolving community, it is important to take some time to reflect on the challenges and opportunities facing our community some of which I have outlined below.

## 1 When We Work Together, We Will Find Great Strength in Our Diversity

Rather than seeing diversity amongst zoos and aquariums as a problem, we should see it as an opportunity to learn from each other and grow as a community. While we may have different cultures and needs, we all share the goals of improving animal welfare and increasing our contribution to conservation. Global representation and a philosophy of continuous improvement are instrumental in improving both operations and the reputations of all members.

Photo: Koala at Healesville Sanctuary. © Zoos Victoria

## 2 The Rise of Animal Rights

Over the last decade, we have seen a number of challenges and thought-provoking investigations into animal rights. In 2019, Canada banned the breeding and holding of cetaceans in captivity. Several states in Australia are undergoing law reforms to better recognise animals' feelings in legislation by expanding the definition of cruelty beyond just physical abuse and incorporating the importance of positive welfare states in animals. The Nonhuman Rights Project and other prominent lawyers are campaigning for animal rights, and a number of facilities holding animals have been challenged with habeas corpus, requiring them to be brought before a judge or into court.



### 3 Concern with Animal Welfare in Society

Interest in animal welfare is growing as a field of concern and study. The number of publications on the consciousness of animals and their capacity to suffer has grown exponentially over the past two decades and continues to grow as a fast-evolving field of science. We are seeing an intergenerational change in attitudes to both the use of animals in society and consideration of the environment.

With animal welfare and sustainability rapidly maturing as social issues, they are increasingly important components of consumer expectations and corporate social responsibility. These changing consumer attitudes and increased concern for animal welfare are relevant for all animal industries, including zoos and aquariums. If our community does not adapt and show clear dedication to high standards of animal welfare and strong conservation commitment, then we risk losing relevance in society.

### 4 Tourism Bodies as the New Global Zoo and Aquarium Police

Zoos and aquariums are major tourist attractions and therefore need to be aware of the latest trends in the tourism market. Research has shown that travellers under 30 consider the ethical impact of their travel more than any other age demographic. When booking a trip, 90% consider a travel company's commitment to ethical travel and 86% are willing to spend more on their travel if they believe the experiences included are ethical. These preferences in younger travellers have resulted in many large travel organisations including Airbnb, TripAdvisor and British Airways, defining ethical animal destinations and actively boycotting facilities that fail to adhere to their standards.

Zoos and aquariums need to pay careful attention to the public perception of their animal use and care practices. We have much to learn on animal-visitor interactions and the message/ image we are projecting under these varying experiences. Zoos and aquariums that ensure ethical experiences and promote environmental benefits as part of the overall experience stand to capture the ethical traveller market.

**“Rather than seeing diversity amongst zoos and aquariums as a problem, we should see it as an opportunity to learn from each other and grow as a community.”**

Dr Jenny Gray





## 5 Global Conservation Role for Zoos and Aquariums

The threats facing animals in the wild are significant and require global, collaborative action. As leading zoos and aquariums, WAZA members stand ready and able to contribute to conservation. Our reach is significant, as we are located in all the major cities around the world. On the global stage conservation organisations and oversight bodies such as the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES), IUCN, Forest Stewardship Council (FSC) and the Roundtable on Sustainable Palm Oil (RSPO) are looking to WAZA to be a global partner. They see the value in WAZA membership, and they want to work with us as a united community. The next decade is crucial in reversing the trends in species conservation and ensuring that zoos and aquariums are included as part of the global solution.

For too many years, leaders within zoos and aquariums have relied on the technical and scientific opinions of their staff to secure animal welfare and to answer the challenges. I believe that the growing disquiet with the perception of zoos and aquariums necessitates leadership involvement in how animals are held, cared for and presented. Every leader has a duty to skill themselves in the science of animal welfare and to continuously improve conditions for animals. We can all recognise the needs of animals by learning from our professional staff. Many changes are simple to implement and do not require extensive resources. If you feel your organisation needs assistance in this area, be willing and open to reach out to another organisation who has demonstrated strong commitment to animal welfare. I have a short list of activities that every leader can initiate:

**“Every leader has a duty to skill themselves in the science of animal welfare and to continuously improve conditions for animals.”**

Dr Jenny Gray

### Public image/message

Take time to stand at all enclosures, attend all keeper talks or visitor encounters and observe how the enclosure and the animals within it appear to the public.

- What message is being projected? Is it respectful to the animal? Is there a clear conservation message?
- Listen to the comments; are they respectful, are they promoting your values?
- Pay particular attention to facilities that look like jails or cages. We abhor the comparison between jails and zoos, yet we continue to design and build facilities that look like jails and present animals in cages or behind bars.

### Animal environment

Animals should live in comfortable and stimulating habitats and have the opportunity to express important natural behaviours.

- Are enclosures complex and suitable to the species?
- Focus on quality not quantity – are enclosures big enough for the number and size of animals? Can snakes stretch out or are the enclosures too small and they have constant bends in their bodies? Can birds fly?
- Are the animals living in appropriate social groups and have the opportunity to experience positive social interactions with their own kind?
- Do your animals live on a range of species-appropriate substrates: grass, sand, water, bark or other species-specific substrates should be present. No animal should spend 100% of their life on concrete.

#### Photo prev. page (top)

Tasmanian devil at Melbourne Zoo © Zoos Victoria

#### Photo prev. page (middle)

Dr Jenny Gray at the 74<sup>th</sup> WAZA Annual Conference © WAZA

#### Photo prev. page (bottom)

Dr Jenny Gray at the 72<sup>nd</sup> WAZA Annual Conference in Berlin © WAZA



## Animal behaviour/condition

Pay attention to the physical and behavioural condition of the animals.

- Are they engaging in species-appropriate behaviour and at an appropriate frequency?
- Do they have adequate choice and control over their daily lives and activities? What can you do to provide more choice and control for them?

What is the physical condition of each animal?

- If you can see the animal pacing in their enclosure, if they have visible wounds, are overweight, have bald spots or show lethargy, investigate further and address the underlying issue. Physical problems are visible to visitors. People should feel positive about visiting zoos and aquariums and this mindset will be enhanced if they see animals living comfortably.

Complacency is a significant risk for modern zoos and aquariums. Our audiences are developing and changing their attitudes and they expect the same of us. While saving species gives us purpose, animal care and compassion give us license to operate.

Like all experiences, being President of WAZA has been fun, exhilarating and challenging. I am extremely grateful to the WAZA Council and the WAZA staff. We have been through a time of great change and are now ready for the next decade.

**“Thank you to all WAZA members for your support and contributions. I look forward to the journey ahead and to working with you to both improve our organisations and to make a significant contribution to conservation and species survival.”**

Dr Jenny Gray



# Summary of 74<sup>th</sup> WAZA Annual Conference



Gavielle Kirk-Cohen

WAZA

WAZA held the 74<sup>th</sup> Annual Conference in Buenos Aires in November 2019, which attracted nearly 200 delegates from 34 countries and regions around the world. We would like to extend a big thank you to everyone who attended the conference and to the hosts, Fundación Temaikèn.

A panel on the WAZA/International Union for Conservation of Nature (IUCN) Global Species Plan delved into how zoos and aquariums can work more closely with the IUCN SSC to reverse trends in species loss and the role they can play as IUCN Red List Assessment centres, looking at the example of The Deep aquarium in the UK.

In the afternoon session of the first day, Kris Vehrs, Executive Director of AZA, discussed the WAZA 2023 Animal Welfare Goal which states that by the end of 2023:

- WAZA national and regional associations must have an animal welfare evaluation process in place and such a process must include specific elements approved by WAZA.
- All WAZA institutional members must be compliant with this process.

Other main themes of discussion over the week included: inclusivity and diversity at zoos and aquariums and how to work with the next generation of zoo and aquarium professionals; crisis communications, animal welfare policies set by the tourism industry, species conservation, sustainability and rethinking on how the zoo and aquarium community can engage with detractors.



Photo: Conference delegates at Fundación Temaikèn  
© Alejandro Wirth/WAZA

The event officially opened with a welcoming address by Rabbi Sergio Bergman, Secretary of Environment and Sustainable Development of Argentina. Followed by a keynote address by Dr Mark Barone of the Population Council, addressing human population growth and its impact on conservation and the role zoos and aquariums can play in addressing this issue.



During the conference, WAZA presented three awards, as well as an additional honour. Zoo Zürich was awarded the WAZA Conservation Award for its outstanding conservation and education capacity-building programme and for its 25-year commitment to the protection of the Masoala National Park in Madagascar. Taronga Zoo was awarded the WAZA Environmental Sustainability Award for its resolute commitment to sustainable practices and driving behaviour change. And Kris Vehrs was honoured with the Heini Hediger award – WAZA's highest accolade for professional excellence – in recognition of her four decades of respected leadership in the global zoo and aquarium community. Lee Ehmke was presented with an honour in recognition of his commitment and 10 years of dedicated service on the WAZA Council.

One of the highlights from the conference, was the zoo visit to Temaikèn which included talks and a keynote address by Dr Claudio Campagna titled: 'How to Save Species When the Planet is Seen from Space', followed by behind-the-scenes tours of the zoo.

Dr Marcela Uhart, from the University of California-Davis delivered a keynote address on how to encourage human behaviour change to achieve biodiversity conservation. This was followed by the Future of WAZA session in which Prof Theo Pagel discussed the results of the WAZA membership survey and provided members with a platform to ask questions or share their thoughts on WAZA as it is today, and what they think WAZA should strive for in the future.



Dr Arnaud Desbiez started off the final day of the conference with a keynote address on how zoos are partnering with his field project to save giant armadillos in the Brazilian Pantanal. In the afternoon, the Annual General Meeting (AGM) session saw the ratification of the elected Council members as well as the passing of the new Spanish bylaws – a heartfelt thank you to Kris Vehrs, Theo Pagel and Myfanwy Griffith who worked extensively on the new bylaws.



**Photo:** Participants of the 74<sup>th</sup> WAZA Annual Conference.  
© Alejandro Wirth/WAZA





**In case you were not able to attend you can view some of the presentations on the WAZA Facebook channel.**

 @officialWAZA

**Photo:** Conference delegates touring Fundación Temaikèn  
© Alejandro Wirth/WAZA

At the AGM, members voted to pass Resolution 74.2 - 2023 WAZA Goal on Animal Welfare Evaluation Processes, as well as Resolution 74.3 supporting the IUCN Species Survival Commission's global call for species conservation action.

And finally, the AGM concluded with the handover of Presidency from Dr Jenny Gray to Prof Theo Pagel. We would like to thank Jenny Gray for her leadership and vision during her term as President and to welcome Prof Theo Pagel as the new President of WAZA.

With members agreeing to the amendments in the new Spanish Bylaws, two new seats from Region Three were added to the council, which means Karen Fifield from Wellington Zoo, and María Clara Dominguez from Cali Zoo, will join the WAZA Council, representing Region Three. Karen Fifield will take over as chair of the, now renamed, Ethics and Animal Welfare Committee, while James Cretney will chair the Finance Committee.

Due to the new Spanish Bylaws, a vote needed to be held to determine which four associations would sit on the Council. A ballot was held, and the four associations which have a voting seat on Council are:

- **The Association of Zoos and Aquariums (AZA)**
- **The European Association of Zoos and Aquaria (EAZA)**
- **The Latin American Association of Zoos and Aquariums (ALPZA)**
- **The Zoo and Aquarium Association – Australasia (ZAA)**

**We look forward to seeing you from 11-15 October 2020 for the 75<sup>th</sup> WAZA Annual Conference, held in conjunction with the International Zoo Educators Association (IZE), hosted by San Diego Zoo Global.**

## Animal Welfare Policies in the Tourism Providers Sector

### Robin Keith

*Associate Director of Vision, Innovation and Strategy at San Diego Zoo Global*

**Robin Keith delivered a thought-provoking talk at the WAZA Conference last year. The below article is based on her presentation.**

Modern zoos and aquariums have an unparalleled opportunity to be agents of change for wildlife. Not only do we have distinctive expertise in animal care and health, we also have the ability to reach hundreds of millions of people annually through direct experience with animals. These experiences inspire passion, wonder and awe, bringing moments of connection, all in service of our vision of a better world for animals, of saving species around the globe. However, there are some who don't see our community in this way, who take the actions that are meant to be positive and inspirational and frame them as being negative. Zoo and aquariums critics are not new, but these organisations are now pressuring and partnering with travel and tourism companies to create animal welfare tourism policies that discourage or preclude visits to zoos and aquariums.

Our first instinct might be to resist, to send press releases and write op-eds and exclaim: "No, no, you've got it all wrong!" – to treat this as if it were a battle we must win. But I believe we must mine for a different framework in our thinking and approach to these issues so that we don't continue to get the same results. I don't pretend

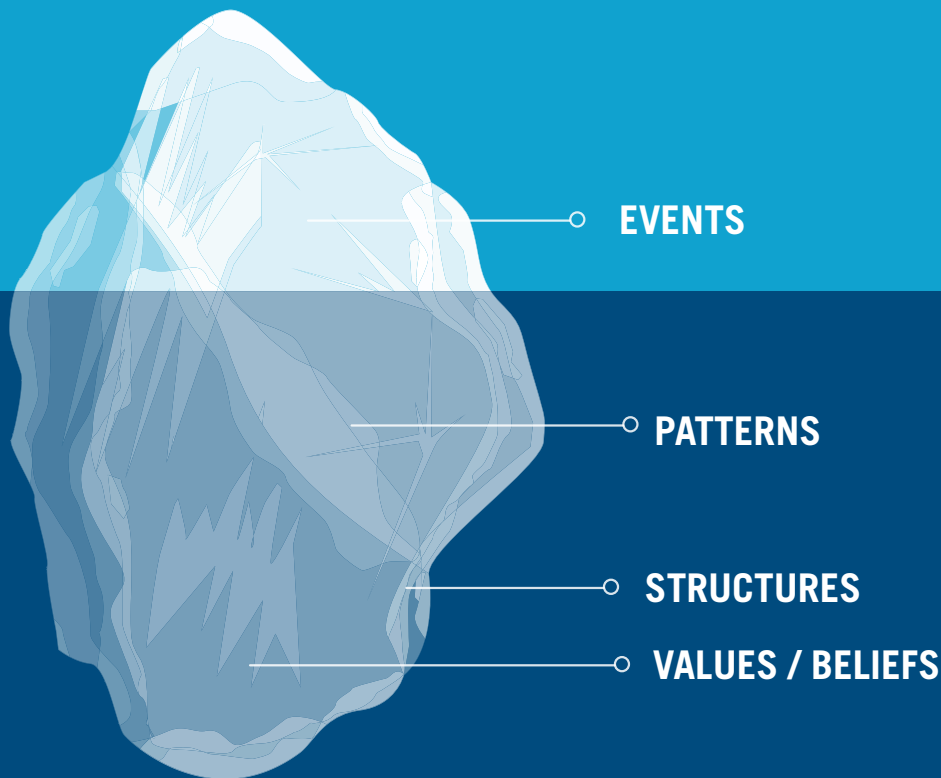
to know what that framework should look like – we're going to have to create it together. What I would like to do is offer a few additional ways of thinking about this that may help us find a new path forward.

Firstly, we exist in a global, complex, and interdependent system. This is not revolutionary; in fact, I suspect most of you agree. And yet, we often behave – in this particular situation, but also in others – as if we exist in a more simplistic and deterministic world. This mechanistic way of thinking is derived from the industrial revolution, and it's not wrong; it works in particular contexts. It is just mismatched with the context we are currently operating within. The current problems we face were created by a world that operated as a global living system.

**"I believe we must mine for a different framework in our thinking and approach to these issues so that we don't continue to get the same results."**

Robin Keith





## LISTEN DEEPER FOR THE MOST LEVERAGE

SAN DIEGO ZOO GLOBAL

To see the world as a system is to see everything as parts of a connected whole. Systems thinking can help shed light on problems – particularly those that seem to continually repeat – by helping us to see them from a different perspective. For us, it suggests a way of viewing this particular issue that is different than breaking it down into discrete parts, analysing those individually and attempting to ‘fix’ what is broken. A systemic approach asks instead – what is the larger system that we are a part of, how is it operating as a whole, and what is our role in its current functioning? Only by engaging in these types of questions can we begin to challenge the existing system.

In a mechanistic view of leadership, the leader is the one with the most information; they hold the formal power and authority. Most of us have been socialised in a top-down model of leadership, but younger generations are being raised with a global, living systems perspective. The traditional ‘expert’ is no longer the only authorised voice. Leaders look and sound different – we only have to look at young people like Greta Thunberg and Malala Yousafzai to get a sense of the thought-leaders and change-agents that this type of worldview authorises. The implications of this are profound: we are no longer guaranteed a leadership position because of our expertise, but our expertise is what we continue to tout.

The second reason to care about the larger system is this: the system is perfectly designed to deliver the results we are currently getting. And, the only way to understand why we are getting these results is to listen deeply to the system. We can use the analogy of an iceberg to illustrate what listening deeply means. The power of systems thinking comes from focusing on the parts of the iceberg that are underneath the water. These parts are unseen, but this is where our greatest leverage for change exists. Most of the time, we are only paying attention and reacting to the parts above the water, and occasionally thinking about the patterns we’re seeing. However, if we want to affect change in the system, we have the most leverage at the deeper levels – values and beliefs.

If we listen deeply to the values and beliefs underneath the opposing views, we will hear that people care about animals, and feel conflicted because they aren’t sure whether animals are living the best life possible at our facilities. In the past, our response has been that we are the experts, and that they should trust us. We don’t need to share or be transparent about how we care for animals. But this approach doesn’t work anymore – the majority of people will not trust us simply because we are the ‘experts’.

Listening deeply is difficult, and this is made even more challenging by our predisposition as humans to an 'us versus them' mentality. It's far easier to use dismissive language to talk about these divergent views – to cast them of as being 'ignorant' or 'crazy' – or to ignore them altogether. We can, and have, rationalised this approach by arguing that these opposing voices represent only a vocal few, that they aren't mainstream perspectives and they won't impact us. However, systems thinking tells us that the greatest areas of opportunity and the greatest challenges can be found at the edges of the system. Change always starts in the margins. By listening deeply – especially to the fringe perspectives – we can access important information.

If we need to listen to the system in order to transform it (instead of just reacting to it) we have to be able to move beyond 'us versus them'. This way of thinking does not create space for listening and learning. Interestingly, the most important determinant of an 'us versus them' mental model is simply the desire to feel good about ourselves. When our group feels good, we feel good. When our group is threatened, we respond as if our own self-concept is at risk. When something comes in and disrupts our modus operandi, we have a choice about how we

respond. What shows up on the outside happens after we've made a choice on the inside. This is where the real work is for our community: in our own internal response to these policies, which are disruptive, not just to our mission and our business but to our very self-concept as people and organisations who care about animals, who are working to implement and promote animal welfare.

This is why I say that ultimately change starts with us. When we allow ourselves to suspend our cynicism and fear, to let go of our mental models of 'us' versus 'them' and 'win' versus 'lose' long enough, we can begin to see the whole of the problem, not just the pieces of it. When we have the courage to stop reacting defensively and to view ourselves honestly and compassionately (even if that doesn't feel good), that's when the real possibilities begin to show themselves. Then our rationale becomes, "Maybe I don't have everything right, and maybe they don't have everything wrong. Maybe both of us see part of the truth." And this is the work of effective leadership – helping to see the holistic perspective, so that we are creating solutions with the whole system in mind.

**"My call to action is simple: let's change the nature of our dialogue and debates. Let's come from an inner place of believing we have something to learn, seeing the act of listening to opposing, divergent viewpoints, and trying to deeply understand them as expanding our viewpoint from a holistic perspective. And let's just see what happens."**



**Photo:** A child meeting penguins at San Diego Zoo.  
© San Diego Zoo

## Finding the Next Generation of Zoo and Aquarium Leaders



**Dr Kathayoon Khalil**

*Conservation Impact Manager at Oregon Zoo*

Photo: Dr Kathayoon Khalil © Oregon Zoo

Last year, I sat with a group of zoo directors and listened to one say: “Where is the next generation of zoo leaders? I just don’t see them.” As a Millennial with aspirations of leadership in a field to which I had already devoted two decades of my life, I was startled. I rattled through the Rolodex in my brain to summon up my friends and colleagues who identified as Millennials, Gen Xers, and Gen Zers, and who were all working to establish themselves as future leaders. There were so many of us – why were we not being seen? In search of insight into this paradox – and in true social scientist fashion – I decided to embark on a mini mixed-methods inquiry. Interviews, observations, and reviews of the copious literature on Millennials in the workplace – all were fair data sources.

First, we must define our current context. For the first time ever, we have five generations occupying the same workforce. This presents an enormous challenge; within those five generations are decades – maybe even a century – of experiences, values, and perspectives that can potentially conflict. Moreover, Millennials and Generation X professionals make up the largest percentage of the workforce in the United States, meaning they are everywhere but somehow still invisible.

Given that context, we can better explore the problem with the concept of “leader blindness.” The first issue is one of diversity – while staff members at Association of Zoo and Aquarium (AZA) institutions may be becoming more racially and ethnically diverse, leadership is still relatively monochromatic.

A recent study of AZA directors found that 70% of zoo directors in the US are male and a staggering 99% are white. While programmes like the AZA’s Executive Leadership Development Programme (ELDP) seek to bring more diversity into leadership, many potential future leaders may be several career steps away from qualifying for these opportunities.

To ensure that we keep young people in the industry long enough to eventually qualify for ELDP, we need to examine a different kind of diversity. When we talk about diversity, we do not just want to talk about the way we look, or who we love, or how we choose to live our lives; we want to talk about diversity of opinion – which is more difficult to detangle and harder to accept and cultivate. When diversity of opinions leads to ousting those who think differently, we hear things like, “they weren’t a good cultural fit” or “they lacked creativity.”





There are several characteristics of Millennials and Generation Xers that may contribute to this conflict. Members of both generations tend to value work/life balance, which means they may work shorter hours and more efficiently but be seen as having a low work ethic. Both generations tend to question authority and have high expectations of their employers. Particularly in this field where our work is our passion, professionals in these age groups may feel particularly slighted when it seems that their efforts are not valued by leadership.



And finally, no discussion about retention is complete without exploring the tender topic of salary. While there is general understanding that working in a field like conservation comes with a lower wage than some other fields, we still expect to receive fair pay for our work. Millennials are saddled with debt, higher than any other generation. Current costs of living are astronomically high, especially in big cities. Asking candidates to have a master's degree and then paying them a bachelor's salary level can be exceptionally damaging for retention rates within the conservation industry. Additionally, part-time jobs and unpaid internships are repeatedly demonstrated to be inequitable and unsustainable.



Reflecting on all of this, where do we go from here? First, analyse your own organisation – how have younger employees been treated? Have there been any recent job losses? Have you inadvertently been complicit in a culture that pushes out young people and makes it harder to identify the leaders among us? On a more positive note, consider which organisations you experienced a culture of encouragement with opportunities provided for young professionals to thrive in?

**Photo (top):** Kelly Gomez showing photos to a chimpanzee. © Oregon Zoo

**Photo (middle):** Red Panda Mei Mei with keeper Sara Morgan © Michael Durham/Oregon Zoo

**Photo (bottom):** Veterinarian Kelli Flaminio and keeper Beth Foster hold a one month-old African painted dog puppy during its first veterinary exam. © Michael Durham/Oregon Zoo





**Photo:** Desi the reticulated giraffe with keeper Michael Suhn.  
© Michael Durham/Oregon Zoo

The next generation of zoo and aquarium leaders are here – but your help is needed in recognising this. We often talk about the next generation and forget that the next generation are among us. We may come from all corners of the globe and be found in the most unexpected places at your institution. While many current leaders progressed their careers by working in animal care, we are seeing more people who are keen to work in zoos and aquariums from a diverse array of fields which offers a richness of skills we may not have previously had.

Some may misinterpret this as the desire of young professionals to take over leadership roles but this is not the case. The solution to generating the next generation of zoo leadership is for experienced animal care professionals to recognise the value of attracting young professionals from all walks of life, providing them with the mentorship and guidance they require. We want seats at the table – which means it is time to build a bigger table and a larger space in which to have these discussions.

Building the next generation of zoos and aquariums must be a collaborative process. Despite our differences, we share common values and a vision of a better future for wildlife and people. Within that vision, however, there are many pathways. Our task is to navigate these pathways – though they may seem disparate at times – with empathy and respect. Boundaries might be pushed; risks may be taken. But within these tensions we can learn to challenge our conceptions and renegotiate the boundaries of what we thought was previously possible.

**“We want seats at the table – which means it is time to build a bigger table and a larger space in which to have these discussions.”**

Dr Kathayoon Khalil

# WAZA Members Support Call for Global Species Conservation

At the Annual General Meeting of the 74<sup>th</sup> WAZA Annual Conference, WAZA members voted unanimously to stand with the IUCN Species Survival Commission (SSC) in reaffirming their commitment to saving species and their populations.

The delegation voted unanimously to endorse and support the Abu Dhabi Call for Global Species Conservation Action, adopted at the IUCN SSC Leaders' Meeting held on 6-9 October 2019 in Abu Dhabi, United Arab Emirates, which calls for action to massively scale up species conservation in response to the escalating biodiversity crisis. The call appeals to the world's governments, international agencies and the private sector to halt species decline and prevent human-driven extinctions by 2030, and to improve the conservation status of threatened species with a view to bringing about widespread recovery by 2050.

## In supporting the call, WAZA member zoos and aquariums committed to the following:

- We, the members of the World Association of Zoos and Aquariums, will support the inclusion of ambitious targets on species conservation in the Post-2020 Global Biodiversity Framework.
- We pledge to support our governments by helping to contribute to an ambitious Programme of Work on Species Conservation to: by 2030, halt species' population declines and prevent human-driven extinctions; and by 2050, improve and ensure the recovery of all threatened species.

## We emphasise the importance of zoos and aquariums in species conservation and commit to scale up our efforts to:

- Apply and promote the One Plan Approach of integrated conservation for species both inside and outside their natural range, and under all conditions of management.
- Continue to lead, and partner on, species conservation projects in zoos and aquariums and in the wild.
- Continue to provide and increase resources for saving species in the wild, together with IUCN and other stakeholders.

## We emphasise the importance of zoos and aquariums in public outreach and commit to scale up our efforts to:

- Educate, engage, inspire and mobilise the general public, via our more than 700 million annual visitors, to raise awareness on species and encourage them to take direct action to support species conservation.
- Raise awareness of species and their conservation challenges through our exhibits, and our communications and education programmes.

**“Species conservation is a key imperative going forward and we appeal to all sectors to urgently respond to this Call by helping pull species back from the brink of extinction.”**

Dr Jon Paul Rodríguez, Chair of the IUCN's Species Survival Commission.



**“We recognise the support of the World Association of Zoos and Aquariums, in particular for its role in caring for species and in connecting communities around the world with wildlife.”**

Dr Jon Paul Rodríguez, Chair of the IUCN's Species Survival Commission.



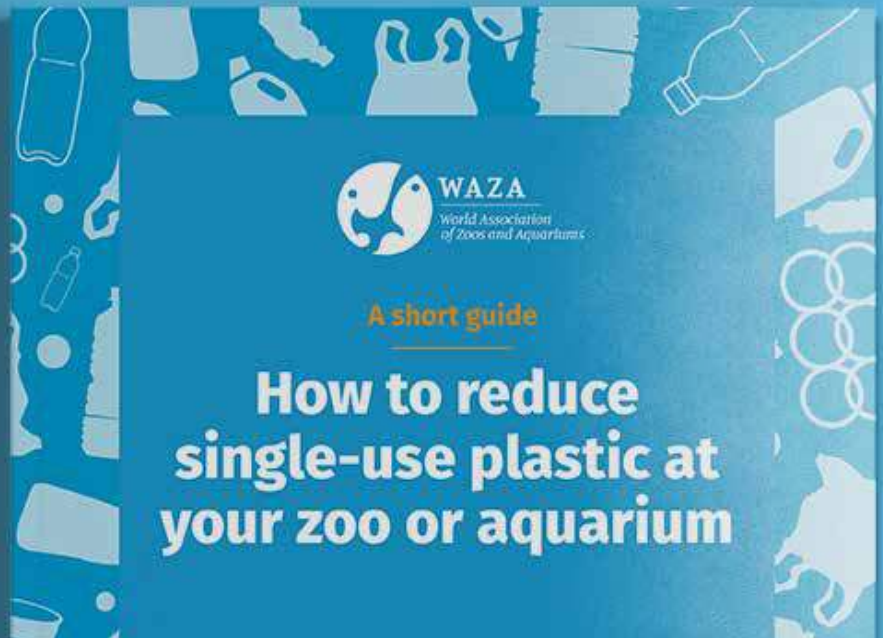
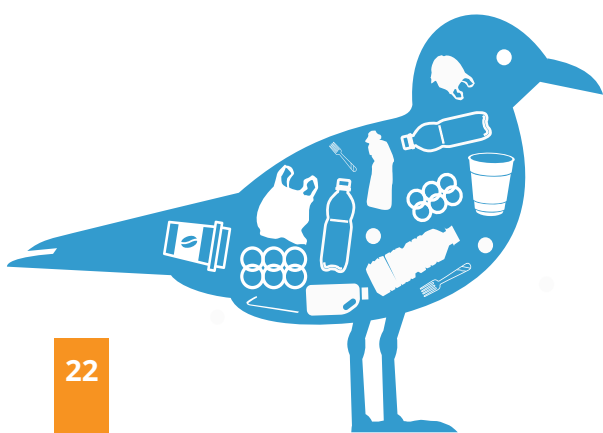
## Plastics Booklet

Gabrielle Kirk-Cohen

WAZA

Plastic pollution has fast become one of the most pressing environmental issues, with plastic production having increased exponentially from 2 million tonnes in 1950 to over 4 million tonnes by 2015. Only 9% of all plastic waste ever produced has been recycled. About 12% has been incinerated, while the rest – 79% – has accumulated in landfills or the natural environment. Every year 8 million tonnes of plastic end up in the world's oceans and if current trends continue, researchers claim our oceans could contain more plastic than fish by 2050. This discarded plastic has dire consequences for marine wildlife with animals becoming either entangled in it or ingesting it as they mistake it for food.

To address this environmental crisis WAZA signed a Memorandum of Understanding (MoU) with the United Nations Environment Programme (UNEP) in 2017, committing both organisations to tackle marine plastic pollution. The five-year agreement encourages WAZA members to reduce or eliminate single-use plastic from their consumer-chains by 2023.



Enclosed with this magazine you will have found the WAZA Guide on How to Reduce Single-Use Plastic at your Zoo or Aquarium. The short guide compiled by the WAZA Taskforce on Single-Use Plastic aims to help your zoo and/or aquarium implement the policies and changes needed to reduce the usage of single-use plastics. Regardless of the location of your zoo and/or aquarium or the size of your budget, this guide contains simple steps to help you start changing the way your organisation thinks about, offers and uses some of the most common single-use plastics.

The guide also contains a number of case studies from WAZA member zoos and aquariums to show what actions, big or small, we can all undertake on the journey to reduce single-use plastics.

To read or download the guide visit:

[www.waza.org/publications](http://www.waza.org/publications)



# FUTURE OF ZOOS AND AQUARIUMS

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Join us in San Diego, USA for the 75<sup>th</sup> WAZA Annual Conference, which will be carried out jointly with the International Zoo Educators Association (IZE) and hosted by San Diego Zoo Global.

WAZA will be celebrating a milestone: 75 conferences in which we have progressively strengthened our global commitment to species conservation. That is why the 2020 theme, 'The Future of Zoos and Aquariums,' is particularly fitting. As we reflect on our origins, and how the zoo and aquarium community has evolved over the decades, it is important to look ahead and embrace the exciting future of progressive zoos and aquariums.

We will work together and discuss how our community can tackle some of the most critical issues of our time and work to save species and their habitats.

**See you in California from 11-15  
October 2020!**







# In search of the Spotted Softshell Turtle in Vietnam:

An implementation of the One Plan Approach

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The Chinese softshell turtle was described 185 years ago as *Trionyx sinensis* by the German zoologist Arend Friedrich August Wiegmann (Wiegmann, 1834). For a long time, *Pelodiscus sinensis* was believed to constitute a single, widespread species occurring from the Russian Far East through the Korean Peninsula, from eastern and central China to Vietnam. However, recent research suggests that cryptic species exist, which means two or more species could be hidden under one species name.

More than three decades ago, populations of the Northern Chinese softshell turtle, from the northernmost part of the distribution range were separated as a distinct species, based on differences in osteology (Chkhikvadze, 1987). Remarkably, this species was already described in 1857 but for a long time thought to be identical and specifically synonymous with *P. sinensis*. In the 1990s two further species from this species complex were described based on morphological characters, the Hunan softshell turtle, *P. axenaria*, and the lesser Chinese softshell turtle, *P. parviformis*, both from central China (Zhou et al. 1991, Tang 1997). Subsequently, based on molecular data, Fritz et al. (2010) confirmed that the genus *Pelodiscus* represents a species complex. The most recent discovery is the spotted softshell turtle, *Pelodiscus variegatus*, which was only described

early in 2019 for the first time, based on genetic and morphological analyses (Farkas et al. 2019). The name refers to the characteristic shell pattern, consisting of large dark spots on the lower surface.

The newly described species is already the fifth recognised species in the softshell turtle genus *Pelodiscus*. And this has important consequences for conservation. While the Chinese softshell turtle was considered to be widespread and not threatened, the division into the actually existing species implies that the size of each species' range, as well as the number of individuals decreases. The most recently discovered *P. variegatus* is only known from central and northern Vietnam as well as parts of southern China (Hainan Province).

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Prior to its discovery, *P. variegatus* was considered part of *P. parviformis*. The latter species was already assessed as threatened and included on Appendix II of the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES). Now that its southern representatives have been separated as a different species, *P. variegatus*, the overall population of each species remains smaller than previously thought. Rhodin et al. (2018) suggested the critically endangered status for *P. parviformis*. Consequently, *P. variegatus*, which was included in *P. parviformis* by Rhodin et al. (2018), should also be included in CITES at the next opportunity, and likewise classified at least as critically endangered on the IUCN Red List.

Because softshell turtles are a common and prized food in East Asia, the natural populations of the newly discovered species might be endangered by local hunting, and further threatened by loss of habitat and competition with other introduced species of softshell turtles.

Our study thus aimed to investigate whether natural populations of the spotted softshell turtle, the description of which was mostly based on older as well as historical museum voucher specimens, still exist. As Vietnam is currently known as the main distribution of the spotted softshell turtle, we focused on this country and first conducted investigations in the central lowland freshwater regions. These conservation-based activities were funded by Cologne Zoo and the European Union of Aquarium Curators (EUAC).

The first investigations took place in central Vietnam in summer 2019, from Thanh Hóa Province in the North to Quảng Trị Province in the South. We inspected local markets, restaurants and farms and interviewed local fishermen and hunters for records of softshell turtles that fitted with the phenetic appearance of *P. variegatus*. We also surveyed potential freshwater habitats by hand, using fishing-rods or nets to find potential members of the new species with the characteristically blotched belly (plastron). Among sighted softshell turtles we found a total of 39 individuals that resembled *P. variegatus*. These candidate individuals were transferred to marked tanks in the Vinh University, Nghe An Province. Individuals were



**Photo:** One of the last pictures of the Spotted Softshell Turtle (*Pelodiscus sinensis*) in the wild. The picture was taken 16 years ago in Quảng Bình Province – 15 years before its official description as a new species to science. © Thomas Ziegler

then catalogued based on photo-identification of the individual belly blotches pattern. To unambiguously uncover potential individuals to represent the newly described species and to ensure it was not another species or hybrid with other (introduced) softshell turtles, genetic screening of candidate individuals was performed based on oral cavity swab samples at the molecular laboratory of the Vietnam National Museum of Nature (VNMN), Hanoi. For the specific identification, a phylogenetic approach in combination with uncorrected pairwise molecular divergences was used to compare the sequence variations between individuals/taxa. For this purpose, partial DNA sequences of the mitochondrial DNA genes encoding 12S rRNA, Cytochrome b, and ND4 (NADH dehydrogenase, subunit 4) were examined from our samples and sequences available from GenBank.

Molecular data revealed eleven of the 39 candidate softshell turtles to be *P. sinensis* with two of them with potential hybrid status. 28 of the candidate individuals were revealed to be *P. variegatus*. They were found in all provinces except for the Quảng Trị Province (one individual from Thanh Hóa Province, nine from Nghệ An Province, 17 from Hà Tĩnh Province and one from Quảng Bình Province).





**Photo:** Habitat of the spotted softshell turtle (*Pelodiscus sinensis*) in Hà Tĩnh Province, Vietnam. © An Vinh Ong



**Photo:** Conservation breeding facility for the spotted softshell turtle (*Pelodiscus sinensis*) at the Melinh Station for Biodiversity of the Institute of Ecology and Biological Resources (IEBR), Hanoi. © Thomas Ziegler



This study thus constitutes that the spotted softshell turtle still exists in the wild in Vietnam, based on both evidence from the trade and on our surveys in the natural habitat. Most findings took place in Hà Tĩnh Province. However, this rediscovery has to be critically examined, as the relatively low number of findings point to a limited population size. Based on our market and trade analysis, human exploitation is also obvious, as are interbreeding events among softshell turtles. For suitable habitats we recorded lakes with flat shores consisting of soft soil, rivers in agricultural landscape and medium sized streams (about 4m in width). However, many of the inhabited freshwater bodies and their surroundings showed signs of human encroachment, such as fishing, vegetation transformation, conversion and pollution. Thus, both *in situ* and *ex situ* conservation measures seem essential, especially as only *P. sinensis* is listed as vulnerable on the IUCN Red List, while the conservation status of *P. axenaria*, *P. maackii*, *P. parviformis* and as of late also *P. variegatus* remains unassessed. Farkas et al. (2019) concluded that given their restricted distributional ranges and the intense exploitation to which they are subjected, all of these species would certainly classify for a higher category rating.

As a first conservation measure, based on the genetically identified, pure individuals, plans for a conservation breeding programme are being established. For this, the individuals which were found to be 100% genetically pure were transferred to the Melinh Station for Biodiversity of the Institute of Ecology and Biological Resources (IEBR), Hanoi, which Cologne Zoo has been closely cooperating with for years (Ziegler et al. 2016). In the latter station, located in northern Vietnam's Vĩnh Phúc Province, a softshell turtle holding and breeding facility was recently built, to house four breeding groups.

**Photo:** Cologne Zoo's Vietnam project coordinator, Prof Thomas Ziegler, inserts the first genetically identified spotted softshell turtle in the conservation breeding facility at the Melinh Station for Biodiversity on 7 November 2019. © Cuong T. Pham



Hopefully successful breeding will occur in the near future, so that offspring can be released at the original habitat sites to replenish natural populations. There are also plans to provide a limited number of surplus offspring to other facilities in Vietnam as well as to overseas institutions, such as European Association of Zoos and Aquaria (EAZA) and EUAC members. This will extend the conservation breeding programme and contribute to the growth of a stable assurance colony for this beautiful, but obviously threatened softshell turtle species.

The detailed results of this study will be published elsewhere. Data from our surveys will also be provided to the provincial authorities for further conservation planning. Some of the investigated freshwater habitats are fortunately already located inside protected areas, such as Vũ Quang National Park in Hà Tĩnh Province, which has already received international attendance through spectacular mammal discoveries, such as the giant muntjac (*Megamuntiacus vuquangensis*).

This is another successful example of the application of the One Plan Approach to species conservation, which is supported by the IUCN and aims to develop integrative strategies to combine *in situ* and *ex situ* measures with groups of experts for the purpose of improved species conservation.

## Acknowledgements

This study was performed by Cologne Zoo and Vinh University in cooperation with the Institute of Ecology and Biological Resources and the Vietnam National Museum of Nature of the Vietnam Academy of Science and Technology, likewise, constituting scientific CITES authorities in Vietnam. Thanks to A. Rauhaus, terrarium section keeper, Cologne Zoo, for support in facility planning. This research was funded by Cologne Zoo and the European Union of Aquarium Curators (EUAC).

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## First Ever Animal Ambulance Arrives in Uganda



Photo: The Drive 4 Wildlife team in Uganda.  
© Paradise Wildlife Park

### Anna Tank

*Paradise Wildlife Park*

Over the years Paradise Wildlife Park in the United Kingdom (UK) has done a tremendous amount to support African species and conservation, from assisting the lemur and Madagascan EAZA appeals to cheetah and rhino conservation, lion collaring for Ol Pejeta wildlife conservancy, and even returning lions back to Uganda.

In February 2019, four members of the Paradise Wildlife Team set off from the UK in a 4x4 Land Rover Defender on a four-week conservation expedition. The team drove 4,500 km across Kenya, Tanzania, Uganda and Rwanda in East Africa, delivering equipment and funds to extraordinary wildlife charities, all working in aid of conservation. The charities included the African Wildlife Foundation, Manyara Ranch Conservancy, Canines for Conservation, Gorilla Guardians, Ugandan Wildlife Education Centre (UWEC) and Ol Pejeta among others.

In each of the four countries, the team, comprising three brothers and their best friend, stopped at different conservation projects to learn about and film the threats facing Africa's animals and learn about the ongoing conservation work taking place by the different charities and projects to protect them.

Following the initial expedition in 2019, the team realised the extent of how crucial the work these organisations are doing to protect and save their country's wildlife. Fellow WAZA member, UWEC particularly resonated with them as they saw first-hand the conflict between local communities and wildlife and wanted to assist UWEC to resolve these tensions. Since then the team have been fundraising with the support of Paradise Wildlife Park and the Big Cat Sanctuary to send an animal ambulance to Uganda. In January 2020, the team completed the second part of the expedition by personally delivering Uganda's first ever animal ambulance to UWEC. A reception was held to mark the occasion, attended by over 100 people, including government officials and national press.

**In January 2020, the team completed the second part of the expedition by personally delivering Uganda's first ever animal ambulance to UWEC.**



UWEC is a vital wildlife conservation organisation in Uganda. It is responsible for the rescue of over 900 animals and accommodates a 24-hour animal rescue hotline. On average UWEC rescues up to six chimpanzees from the illegal wildlife trade per year.

The animal ambulance, a converted ex-military Land Rover Defender 130, will aid UWEC in its vital work rescuing animals caught from the illegal wildlife trade and in mitigating human wildlife conflict. The Drive 4 Wildlife team ensured that the animal ambulance was fully equipped with the latest animal protection and rescue modifications. These include an animal crate to secure any animals rescued from the field or being released back into one of the national parks. A fridge to store any medicines or vaccines as well as blood samples taken from the field for research purposes. A winch has been installed on the front of the car to pull out any trapped animals such as elephant, giraffe and rhino. The light bars are full LED and powerful, which will help the anti-poaching team on their night drives in search of poachers.

Overall, Drive 4 Wildlife raised over £50,000 from their 'Just Giving' fundraising website and through the Paradise Wildlife Park website itself. All funds were donated to the vehicle and to Uganda, with any extra monies being used to support the UWEC team in their anti-poaching and animal rescue efforts.



**Photo:** The Drive 4 Wildlife team handing over funds to the anti-poaching team at Ol Pejeta Conservancy, with one of the two last remaining northern white rhinos.  
© Paradise Wildlife Park



**Photo:** Delivering the Animal Ambulance to UWEC.  
© Paradise Wildlife Park



**Photo:** UWEC's James Musinguzi behind the wheel of Uganda's first animal ambulance. © Paradise Wildlife Park



**Photo:** Underwater viewing area of Expedition Peru: Trek of the Andean Bear, which includes a multi-species aquarium. © Nashville Zoo



## New Exhibit Feature

# Nashville Zoo

**Inset Photo:** Children get up close to an Andean bear and enjoy unobstructed views of the Expedition Peru exhibit. © Nashville Zoo

The Nashville Zoo in Tennessee, USA has been busy with the opening of not one, but two new species exhibits, as well as an Animal Health Center.

On 15 March 2018, Nashville Zoo officially opened Expedition Peru: Trek of the Andean Bear, making it the first time Andean bears have been housed at the zoo in its 21-year history. A second exhibit called Tiger Crossroads was opened a year later on 12 April 2019 and is home to the zoo's new Sumatran tigers. Following this, in May 2019, Nashville Zoo officially opened the Animal Health Center.

## Expedition Peru: Trek of the Andean Bear

From the moment guests step into Expedition Peru, they are immersed in an authentic, indigenous village with a Peruvian lodge containing interactive educational displays and spectacular observation points to gaze at these beautiful South American bears. Visitors get unobstructed views of the bears from several areas, including one underwater viewpoint. At other points, guests have the opportunity to observe from a viewing deck and watch behavioural training presentations. Besides the Andean bears, the Peruvian village is home to 14

different species including cotton-top tamarins, southern pudú, guinea pigs, and a multi-species aquarium representing the biodiversity of the Amazon River Basin.

The 6,800 m<sup>2</sup> (74,000 square feet) exhibit received Top Honors in the Exhibit Design Award by the Association of Zoos and Aquariums (AZA) at the AZA Annual Conference in New Orleans last year. The award is the highest achievement for exhibit design given by AZA and is judged on different categories by 18 seasoned zoo and aquarium professionals on exhibit design, contribution to conservation, interpretive programming and how the exhibit fits in with the Zoo's long-term strategic goals.

The women's restroom in Expedition Peru features a floor-to-ceiling glass window, perfect for viewing the family of cotton-top tamarins. This lush indoor exhibit and restroom was recently awarded Best Restrooms in America by Cintas, while the exhibit itself was also awarded the Associated Builders and Contractors 2018 Construction Award of Excellence.

Nashville Zoo has pledged a total of US\$300,000 in financial support over five years to three *in situ* partners – Andean Bear Conservation Alliance, Proyecto Titi and the Spectacled Bear Conservation project.



## Tiger Crossroads

Originally built in 1989 as a black bear exhibit and then home to generic tigers until 2015, the Zoo's tiger exhibit needed to be renovated. Improvements to the exhibit almost doubled the size of the tigers' habitat and modernised the night quarters as well as adding a new indoor viewing area for guests. The viewing building features reinforced glass panels for close-up views of the majestic Sumatran tigers, with an interactive training window to allow guests to see keepers working with the tigers.

There are also interactive displays to engage and educate visitors about tiger conservation. In addition, the outdoor bridge viewing area has been renovated to visually mirror the Asian architectural components featured on the new viewing building. Over 8000 feet of carved panels were hand-painted by zoo staff who volunteered their time and artistic talents, saving the Zoo a tremendous amount of money and developing a huge sense of pride among the entire staff. Highly stylised, ornate and detailed Sumatran carvings preside over the bridge entrance, the exterior of the viewing building and in the main viewing area adding to the rich cultural authenticity. As a result of these new exhibits the Zoo has experienced a 20% increase in attendance.



**Photo:** Crossroads outdoor bridge viewing area, with Asian architectural components. © Nashville Zoo



**Photo:** Children get close-up views of the Sumatran tigers in Tiger Crossroads. © Nashville Zoo



**Photo:** Children learning about tiger conservation with the interactive displays in Tiger Crossroads. © Nashville Zoo



**Inset Photo:** The observation deck gives visitors the opportunity to witness surgeries and procedures. © Nashville Zoo



## HCA Animal Healthcare Center

Designed by Earl Swensson Associates, Inc., Nashville Zoo's HCA Animal Healthcare Center is a 1,800m<sup>2</sup> (24,000 square feet) facility that includes areas for observation, diagnosis, radiology, surgery, laboratory, pharmacy, and administrative functions. Additionally, there are a couple of rooms where visiting students and interns can stay to alleviate accommodation expenses and have proved invaluable in any event that would require veterinary staff to be readily available during the night.

The facility is a destination for visitors to discover first-hand how animal care is delivered at the zoo. A covered observation deck with tiered seating and viewing platform allows visitors to witness surgery and other procedures as they occur. Public traffic is separated from back-of-house functions to enable staff to perform daily tasks and to ensure animal and visitor safety. Animal holding/treatment and staff zones are positioned to minimise travel times and reduce animals' anxiety levels during transport. A 'push alley' guides animals along the corridor which promotes animal and staff safety. Treatment and holding areas also incorporate natural lighting to help preserve animals' natural circadian rhythm throughout treatment.

The new facility includes one operating room and two treatment rooms, animal housing, an animal ICU, nursery, X-ray, laboratory, pharmacy and other ancillary support spaces.

A new 250 m<sup>2</sup> (2,660 square foot) Quarantine Building will also connect to the existing Animal Quarantine Building. Adjacent to the main lobby, a large classroom, conference room and multi-functional spaces will attract a variety of community groups. With views of adjacent zoo exhibits, these spaces will also provide a location for revenue-generating special events and after-hours programming. In addition to upgraded medical equipment, remote-controlled lighting, cameras and other modern features, the facility is LEED Silver certified for sustainable building design and operations.

The veterinary center was also recently awarded the Excellence in Construction Award in the Special Construction category by the Greater Tennessee Chapter of the Associated Builders and Contractors. While designing the Animal Health Center, Zoo staff travelled to 13 different zoos, incorporating the best technology and design ideas to create the award-winning center.



# Update on International Studbooks (ISBs)

Changes between May 2019 and 22 January 2020

## Published ISBs (17)

- **Cheetah** (*Acinonyx jubatus*) (2018 ed.) – Laurie Marker (Cheetah Conservation Fund -CCF, Namibia)
- **Edwards' pheasant** (*Lophura edwardsi*) (2019 ed.) – Tania Gilbert (Marwell Zoo, UK)
- **Golden monkey** (*Cercopithecus kandti*) (2018 ed.) – Yu Zeying (Chinese Association of Zoological Gardens - CAZG, China)
- **Goodfellow's tree kangaroo** (*Dendrolagus goodfellowi*) (2018 ed.) – Megan Richardson (Melbourne Zoo, Australia)
- **Grevy's zebra** (*Equus grevyi*) (2018 ed.) – Tanya Langenhorst (Marwell Zoo, UK)
- **Hartmann's mountain zebra** (*Equus zebra hartmannae*) (2018 ed.) – Tanya Langenhorst (Marwell Zoo, UK)
- **Hooded crane** (*Grus monacha*) (2018 ed.) – Kazutoshi Takami (Osaka Municipal Tennoji Zoological Gardens, Japan)
- **Lion-tailed macaque** (*Macaca silenus*) (2018 ed.) – Alex Sliwa (Cologne Zoo, Germany)
- **Mexican grey wolf** (*Canis lupus baileyi*) (2019 ed.) – Sarah Greely (The Living Desert Zoo and Gardens, USA)
- **Orangutan** (*Pongo sp.*) (2018 ed.) – Megan Elder (Como Park Zoo and Conservatory, USA)
- **Partula snails** (*Partula sp.*) (2018 ed.) – Dave Clarke (ZSL London Zoo, UK)
- **Pygmy hippopotamus** (*Hexaprotodon liberiensis*) (2018 ed.) – Beatrice Steck (Basel Zoo, Switzerland)
- **Scimitar-horned oryx** (*Oryx dammah*) (2018 ed.) – Tania Gilbert (Marwell Zoo, UK)
- **Sika deer** (*Cervus nippon*) (2019 ed.) – Jan Pluhacek (Zoo Ostrava, Czechia)
- **Silvery gibbon** (*Hylobates moloch*) (2019 ed.) – Holly Thompson (Perth Zoo, Australia)
- **Somali wild ass** (*Equus africanus somaliensis*) (2018 ed.) – Beatrice Steck (Basel Zoo, Switzerland)
- **Visayan spotted deer** (*Rusa alfredi*) (2018 ed.) – Christina Schubert (Landau Zoo, Germany)

## ISBs archived (0)

- None

## New ISBs approved (1)

- **Raggiana bird of paradise** (*Paradisaea raggiana*) – Jessica Theule (San Diego Zoo Global, USA)

## Inter-institutional ISB transfers

- **Partula snails** (*Partulidae*) from Donald McFarland (Auckland Zoo, New Zealand) to Dave Clarke (London Zoo, UK)
- **Eastern bongo** (*Tragelaphus eurycerus isaaci*) from Lydia Bosley to Nick Davis (Chester Zoo, UK)

## ISB keepers stepping down:

WAZA would like to thank Dr Thomas Kauffels (Opel Zoo, Germany)\*, Lydia Bosley (Oregon Zoo, USA), Donald McFarland (Auckland Zoo, New Zealand), and Leif Blomqvist (Norden's Ark, Sweden) for their long-term commitment towards the babirusa, eastern bongo, partulid snails, and snow leopard ISBs, respectively.

*\*At the time of this publication, the application of a new keeper for the babirusa ISB is in process.*



Photo: Babirusa.  
© Chester Zoo



Photo: Raggiana bird of paradise.  
© San Diego Zoo Global

## Recognising Leif Blomqvist



WAZA would like to recognise and extend a heartfelt thank you to Leif Blomqvist for his more than four decades contribution to managing the International Studbook (ISB) for snow leopards. Blomqvist has run the snow leopard ISB from 1976 to 2019 and has decided to retire from the role.

In addition to the snow leopard ISB, he also co-chaired the first EAZA Felid Taxon Advisory Group (TAG) together with Sean McKeown for a number of years and coordinated the snow leopard European Endangered Species Programme (EEP) from 1986 - 2017, the EEP for wolverines from 1994 - 2017, and has been coordinating the European Studbook (ESB) for forest reindeer since 2001.





WAZA

World Association  
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Photo: Chimelong Safari Park welcomes more than four million visitors a year. © Chimelong Safari Park

## WAZA is pleased to have recently welcomed four new members to its global base.

Chimelong Safari Park in China, Khon Kaen Zoo and Ubon Ratchathani Zoo in Thailand, and the Mahendra Chaudhary Zoological Park Chhatbir in India have joined as WAZA Institutional members. Welcome to the WAZA family!



Chimelong Safari Park, situated in Guangzhou, China was founded in 1997 and is dedicated to wildlife conservation, public education and scientific research.

The park conducts scientific research on wildlife behaviour and ecology, nutrition and breeding, disease prevention and control, and has successfully bred giant panda triplets – the world’s first and only pair of surviving panda triplets.

The 130-hectare park attracts more than four million visitors annually and is home to over 200 species of rare wildlife. Chimelong established a Conservation Foundation to support a wide range of *in situ* and *ex situ* conservation programmes, both in China and internationally. Chimelong has also forged strong links with many Chinese national conservation projects which have both *in situ* and *ex situ* elements to them, with Chimelong having bred and reared many species for current and future reintroduction projects.



Photo: Chimelong's Safari on wheels. © Chimelong Safari Park





**Khon Kaen Zoo** was established in 2009 by the Thailand Ministry of Natural Resources and Environment to serve as an endangered species conservation centre and ecotourism attraction. The park spans 132-hectares and is divided into two sections: the zoo and an education area. The zoo has a strong educational component and aims to raise public awareness about the importance of protecting wildlife and plant species. Khon Kaen Zoo aims to be a wildlife conservation and research centre that successfully revives the surrounding ecosystem of wildlife and forest.



Photo: Khon Kaen Zoo's Land of the Deers.  
© Kohn Kaen Zoo



**The Ubon Ratchathani Zoo**, located in the Dong Fa Huan National Forest in Thailand, spans across 195-hectares and is home to native wildlife typically found in the abundant surrounding forest. The zoo focuses on conservation of local wildlife, natural resources and the environment, and cultivates public awareness around these topics. Ubon Ratchathani is involved in breeding programmes of native species aimed at sustainable reintroductions.



Photo: Entrance to the Ubon Ratchathani Zoo.  
© Ubon Ratchathani Zoo



Photo: Squirrel monkey.  
© Ubon Ratchathani Zoo





**The Mahendra Chaudhary Zoological Park Chhatbir**, also known as the Chhatbir Zoo, is located in the Punjab region of northern India. The zoo was officially inaugurated in 1977 by the then governor of Punjab, Mahendra Mohan Choudhury and it was christened as Mahendra Chaudhary Zoological Park. Spread across an area of 202-hectares, it is one of the largest zoos in India. It is situated in the protected forest area of Chhatbir which was once the hunting reserve of the Maharaja of Patiala. Today it is home to more than 1,300 wild animals and birds of around 105 different species. The Chhatbir zoo has primarily been established with the objectives of breeding rare species of wildlife, conservation education, and research on wildlife behaviour and disease management.

The zoo has adopted eco-friendly policies to reduce single-use plastic on site and is scientifically regulating solid and liquid waste to ensure sustainable operations. Under the State's Conservation policy Chhatbir zoo acted as a Nodal agency in the Gharial Reintroduction Programme, whereby the wildlife wing of the Department of Forests successfully released gharials in the Beas River System in 2018.



Photo: Chhatbir Zoo Entrance.  
© Mahendra Chaudhary Zoological Park



Photo: Zoo visitors celebrating World Environment Day at Chhatbir Zoo. © Mahendra Chaudhary Zoological Park



## New Honorary Members

**At the 74<sup>th</sup> WAZA Annual Conference, the WAZA Council named 14 people to receive WAZA Honorary Membership to recognise their long-term dedication and contribution to the zoo and aquarium community.**

We would like to thank the following new WAZA Honorary Members for their leadership and commitment to the global zoo and aquarium community, as well as for their work within their respective WAZA member organisations. We look forward to having them remain a part of the WAZA community.

- **John Lewis**, Los Angeles Zoo
- **Suzanne Gendron**, Ocean Park Corporation
- **Dennis Kelly**, Smithsonian's National Zoological Park
- **Manfred Niekisch**, Zoo Frankfurt
- **Eric Miller**, Saint Louis Zoo
- **Douglas Myers**, San Diego Zoo Global
- **Kris Vehrs**, Association of Zoos and Aquariums (AZA)
- **Anna Croukamp**, Parque das Aves
- **Mark Reed**, Sedgwick County Zoo
- **Susan Hunt**, Perth Zoo
- **Clifford Nxomani**, National Zoological Gardens of South Africa
- **Bryan Carroll**, Bristol Zoo
- **Mati Kaal**, Tallinn Zoo
- **Jonathan Wilcken**, Auckland Zoo





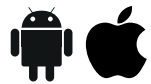
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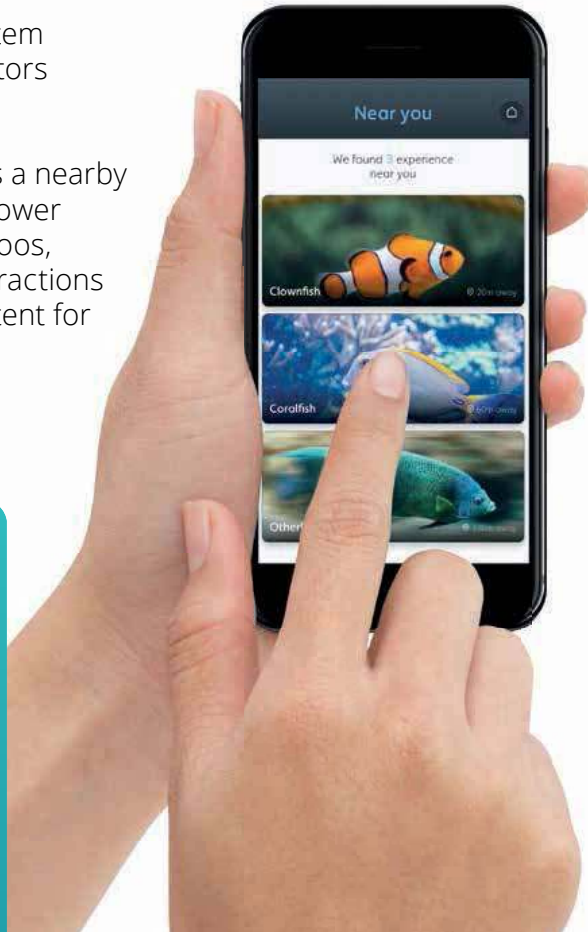
The app runs automatically when it detects a nearby facility using the Aratag system. With the power of Aratag's underlying client CMS system, zoos, aquariums, museums and other tourist attractions can craft customized, site-specific app content for their visitors.



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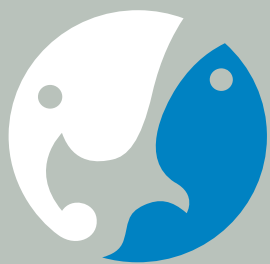
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Aratag is designed and developed by Pangea Rocks A/S in collaboration with Aalborg University.



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