

# ZOOQUARIA

QUARTERLY PUBLICATION OF THE EUROPEAN ASSOCIATION OF ZOOS AND AQUARIA

SPRING 2013

ISSUE 81



## Going local

WHY CONSERVATION BEGINS AT HOME

## Strategically speaking

EXCITING NEW DIRECTIONS FOR EAZA

## Getting the message right

THE LANGUAGE OF CONSERVATION



## Turaco tales

BREEDING THESE BRILLIANT BIRDS

## Delightful Dianas

EXPLORING THIS CHARISMATIC MONKEY'S HISTORY





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## Zooquaria

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## From the Director's Chair

I have just returned from attending and speaking at the AZA Directors Policy conference in the city of New Orleans in Louisiana. It was generously hosted by the Audubon Zoo, who were extremely welcoming hosts and looked after all the delegates in fine style, including a rather amazing banquet at the zoo. We had a rousing ice-breaker at the Aquarium of the Americas, and also found time to visit the insectarium in the heart of the city. This was an excellent meeting filled with numerous interesting presentations and diverse topics ranging from conservation to marketing to safety and much more.

I was joined at the meeting by two other EAZA colleagues: Jorg Junhold, who was there in his dual capacities of Leipzig Zoo CEO and WAZA President, and David Field of ZSL, also representing BIAZA as their Chairman. During a session on zoo exhibit development Jorg gave an overview of the transformation of Leipzig under his tenure, and earlier in the meeting David described the built-in conservation commitments at each new exhibit development at ZSL. I had the opportunity to present information to our US colleagues on the welfare standards of EAZA and our outreach work via the Technical Assistance Committee and EAZA Academy to developing zoos in Eastern Europe – I think they were suitably impressed by the progress EAZA has made, but also aware of the size of the task ahead of us in assisting developing zoos.

While the highlight of international conferences such as this is always meeting with our colleagues (and friends) from 'across the pond' and exchanging information, it also means that we sometimes have the opportunity to travel to intriguing cities, and New Orleans is as intriguing as it gets. It's an American city that 'feels' European, having a complex history with Creole, Cajun and American cultures competing and then blending, music on every corner and bar from zydeco to jazz, a past with slavery forming the bedrock of the economy to a thriving mixed community working together for their future and rebuilding the city after the devastation of Hurricane Katrina. One of the delights in visiting such a city is of course the cuisine that such a diverse cultural background brings and New Orleans is a mecca for 'foodies'. Jambalaya, rich seafood étouffée, po-boys (fabulous and enormous New Orleans sandwiches); the list is endless. In talking with a local Creole tour guide she told me that the holy trinity of Creole cooking is onions, bell peppers and celery. It forms the basis of many of their famous recipes including of course gumbo, that tantalizing mix of many flavours and ingredients in a rich soup with rice.

This got me thinking – in the gumbo that is a zoo association with our many flavours from all over Europe and the Middle East, what would be our own holy trinity? We have many tasks to accomplish so how could we narrow it down to just three? Well, for me it would be the following: the highest welfare standards for the animals in our care,

working to ensure that our joint conservation mission (via field programmes, education, research and breeding endangered species) is achieved, and, in order to do all this of course, full participation of all members in the joint tasks of the association. We have a clear roadmap for the future with the publication of our new 2013-2016 strategy (see p24) and if we keep in mind our holy trinity I think we will be able to achieve it with style. Our strategy is available on the website and you will see that we have many exciting goals and dozens of actions needed to achieve them. How can individual members continue to play their part in delivering this next strategy? Well, to start, I hope you find time in your busy schedules to read through both the narrative and the individual actions and I do hope you find them stimulating and ambitious. If you have particular ideas related to delivery of parts of the strategy we would love to hear them either via the Executive Office or the respective committees which deal with the subject area.

Together we can deliver this future vision of our association and I look forward to working with you all in this undertaking.

A belated Happy New Year to you all.



Dr Lesley Dickie  
Executive Director, EAZA



## NOTICEBOARD

### EU ZOO DIRECTIVE GUIDELINES UNDER WAY

THE EUROPEAN COMMISSION recently awarded the tender to draft guidelines to assist the implementation of the Zoos Directive (1999/22/EC) to the Dutch company VetEffect, working with the Active Life Company. Active Life has drafted guidelines to assist the implementation of the Directive in Spain (*The Zoological Park: A New Ally for Biodiversity*) and it is likely that a similar document will be prepared to provide assistance to some member states in implementing the Directive. A small stakeholder group will meet twice before a larger stakeholder meeting later this year to review progress on this document. EAZA has been invited to take part in this stakeholder group and will represent EAZA members in EU Member States. NGOs such as the IUCN and competent authorities from three countries will also be represented.



RED PANDA (*AILURUS FULGENS*), © ROB DOOLAARD, DIERGAARDE BLIJDDORP



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### RED PANDAS GO GLOBAL

THE CONCEPT OF WAZA'S GLOBAL Species Management Plans (or GSMPs) was launched in 2003, write *Martin van Wees and Janno Weerman, Red Panda EEP Coordinators, Rotterdam Zoo, The Netherlands*. Global management may be the only way in which the long-term survival of many species in zoos can be ensured. Sadly, at the beginning of 2012 only two GSMPs were active. In order to facilitate the establishment of more recognised global programmes, WAZA organised a meeting in 2011 to look at the future of international studbooks.

Red pandas have been managed unofficially on a global scale since the early 1990s. To get this programme officially recognised as a GSMP, a special red panda workshop was held in Rotterdam Zoo (home of the global studbook) in April 2012. This workshop was attended by all regional coordinators and led by Kristin Leus (CBSG-Europe). A captive breeding masterplan (for the coming six

years) and a formal application for GSMP status were drafted and later approved and submitted to CPM/WAZA. In October 2012 the red panda GSMP was officially approved by CPM/WAZA.

It is important to note that the status of GSMP does not diminish the importance of regional management; we retain autonomy within the EEP and, in addition, gain several advantages:

- better access to unrelated animals for the EEP;
- greater status of the red panda programme and increased prominence of the species;
- more regional support for inter-regional transfers;
- stronger links with range state partners;
- access to potential display animals to satisfy the huge demand for red pandas in Europe.

So participating in the red panda GSMP is a true win-win situation for the EEP!



## EAZA CONFERENCES AND EVENTS

Don't forget to check the Events Calendar on the EAZA website for upcoming events, including EAZA's engaging programme of conferences:

★ The **EAZA European Zoo Educators (EZE) Conference 2013** will be taking place from 4-7 March, preceded by an EAZA Academy workshop. The conference will be hosted by Burgers' Zoo in Arnhem, the Netherlands, famous for its innovative 'eco-displays', featuring tropical rainforest, North-American desert and the Indo-Pacific Ocean. In March 2013 the park will celebrate its 100th anniversary, and is thrilled to be hosting the EZE Conference in this special year.

★ On 24-26 April, **EAZA Directors' Day and Spring Council** will take place in Athens, Greece, hosted by Attica Zoo. EAZA Directors' Day and Spring Council is open to directors and CEOs of EAZA member institutions, and all EAZA member institutions should have received an email inviting directors to register for the conference and book their accommodation. If you have not received your invitation email, please contact the EAZA Executive Office as soon as possible.

★ The **EAZA Annual Conference 2013** will take place from 24-

28 September, hosted by Edinburgh Zoo in the UK. The conference itself will be based in the heart of this historical city, one of the United Kingdom's most popular tourist destinations. Registrations are now open and accommodation can be booked in a range of hotels located around the city centre; visit the EAZA website for more information. The conference will take place at Edinburgh International Conference Centre (EICC), a dedicated conference and exhibition centre.

★ Save the date in 2014 for the third **EAZA Conservation Forum**, hosted by Leipzig, Germany, and taking place from 6-9 May. The EAZA Conservation Forum is a biennial event bringing together over 100 representatives of zoos and aquariums, conservation organisations and *in situ* conservation projects for three days of workshops, presentations and other activities. Further details and a call for papers will follow over the coming months.

★ **Mid-year TAG Meetings:** don't forget to regularly check the Events Calendar for details of upcoming Mid-year TAG Meetings.



EDINBURGH: HISTORIC  
HOME TO THIS YEAR'S EAZA  
ANNUAL CONFERENCE



## Asian Elephant Health, Reproduction and Breeding Management

We are currently taking enrolments for our 2013 course

This is an International training course on the management of the health, reproduction and breeding of Asian elephants. The course has two components, a stand-alone online course that is designed to provide you with background knowledge in elephant reproduction and health. Additionally there is a one week practical component in Kandy, Pinnawela and Uda Walave in Sri Lanka

There are a limited number of subsidised places on both the online and practical courses for home-range, affiliated organisations and students.

For further information please visit:

[www.asiaelephanthealth.org/info](http://www.asiaelephanthealth.org/info)

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## Kristine Schad

**Position:** Population biologist

**Hobbies:** hiking; traveling; is eating chocolate a hobby?

**Last book read:** Wild by Cheryl Strayed

**Last movie seen:** Les Misérables

**Last concert attended:** The National

**Last trip made abroad:** Amsterdam for my interview, but before that it was Panama to teach an amphibian population management workshop

### QUESTIONS:

**Could you describe your career path to date?**

My university research encompassed treefrog acoustics and behaviour, gecko behaviour, and wildlife crossing efficacy. I've been working with the American Association of Zoos and Aquariums (AZA) Population Management Center (PMC) for the last six years. I started out there as a studbook analyst, assisting studbook keepers with data entry, conventions, and validation.

For the last four years, I've been a population biologist, analysing the genetics and demography of zoo and aquarium populations. I've also taught new studbook keepers at the AZA population management schools since I started.

Along the way, I've tried to stay involved with amphibian projects, which have ranged from creating amphibian data entry guidelines, helping with the amphibian population management guidelines, teaching an amphibian population management workshop in Panama, and serving as co-chair for the Amphibian Population Management Committee with Amphibian Ark.

**What is the most memorable or fascinating event in your career so far?**

Travelling to Panama to teach an amphibian population management workshop. It was an amazing experience to see the research stations, meet the dedicated people working there, and find ways to make amphibian data entry easier and effective while fitting it into an already busy staff schedule so we can all work together to help these frog populations.

**What attracted you to this job in EAZA?**

As the first full-time population biologist for EAZA, I'm attracted to the opportunity to take my previous experience and skills from the AZA PMC and apply them to EAZA current practices to see how we can more effectively manage populations in EAZA. And living in Europe is certainly intriguing as well!



**What role do you think EAZA will be able to play in the years ahead?**

EAZA is already a leader in maintaining high standards in animal care, research, and conservation for their member institutions. I know EAZA will continue to strive to uphold these standards as it grows with the evolving zoo and aquarium community. I plan to contribute to the population management of our animal collections as best I can.

**What sort of connection will you be hoping to build up with members?**

As a population biologist, I hope to be viewed as a consultant that will assist all EAZA zoos and aquariums with their institutional wants, needs, and goals while at the same time meeting the goals for healthy animal populations.

**What are you most looking forward to in this job?**

I'm looking forward to getting to know more about each EAZA institution and animal population as well as meeting and working with all the dedicated people involved in the EEPs, ESBs and TAGs.

'I know EAZA will continue to strive to uphold these standards as it grows with the evolving zoo and aquarium community. I plan to contribute to the population management of our animal collections as best I can.'



## BIRTHS AND HATCHINGS

### ANOA ARRIVAL

ON 15 DECEMBER 2012 Artis Royal Zoo welcomed the birth of a female lowland anoa named Ayunda, writes Warren Spencer, Curator, Artis Royal Zoo. She is the second female calf born to parents Jeanette and Pipik in recent years; their previous one being Oana, born on 4 May 2011. These births are a welcome addition to the EEP. Jeanette is without doubt an excellent mother; very calm and attentive, and we are thrilled that Ayunda continues to flourish.

Current taxonomic clarity notwithstanding, Artis has kept both the lowland anoa (*Bubalus depressicornis*) or anoeang, and mountain anoa (*Bubalus quarlesi*) or Quarles anoeang, in the past.

The old Dutch names of Anoeang and Quarles Anoeang respectively seem, unfortunately, to have been lost in the mists of time, which is a great shame!

We have many historical records in our archives for this species, including the first lowland anoa arriving at Artis on 29 July 1871, as well as images of a Quarles anoeang female with a seven-week calf, and an anoeang lying beside the historical Minangkabau-huis which still stands as an animal exhibit to this day.

These records and images are testament to the rich history of this species at Artis, and the recent births provide a continuing contribution to the current zoo population of this endangered species.



LOWLAND ANOA (*BUBALUS DEPRESSICORNIS*) © RONALD VAN WEEREN; MINANGKABAU-HUIS 1915 ARTIS ROYAL ZOO ARCHIVES



### TRANSATLANTIC COOPERATION LEADS TO POLAR BEAR BIRTHS

THE BIRTH OF 1.1 POLAR BEARS IN DIERENRIJK is not only a first for this young Dutch zoo, it also highlights a rare cooperation with the polar bear SSP and EEP, writes Kris Jansen, Head Keeper / Curator, Dierenrijk. On 1 April 2010 the first of many emails had been sent across the Atlantic to arrange the exchange of two polar bears. After more than one year of preparation, a male polar bear, Jelle, from Dierenrijk in the Netherlands arrived at Zoo Sauvage de Saint Félicien in Quebec, Canada. In return a female polar bear, Frimas, came from Canada to Dierenrijk.

The birth of the two cubs also means that Dierenrijk, after three failed attempts with an older female, finally has the cubs the zoo had been hoping for. Mother Frimas and cubs Noordje and Pixel are thriving, as visitors can see for themselves on live video stream from the bears' den. The cubs will make their first steps outside around the end of February... an event that will be celebrated with a big baby shower.



CLOCKWISE FROM TOP LEFT: FRIMAS WITH HER CUBS; FRIMAS SAYS HI; CUBS NURSING; FRIMAS GROOMS AND LICKS THE CUBS



SOMALI WILD ASS (*EQUUS AFRICANUS SOMALIENSIS*) TORBEN WEBER, ZOO BASEL



## AN EQUINE SUCCESS STORY

ON 27 DECEMBER 2012, SOMALI WILD ASS mare Tana in Basel gave birth to a healthy filly, called Jana, writes Beatrice Steck, Somali Wild Ass EEP Coordinator's Assistant, Zoo Basel. Jana is the 41st foal born in Basel zoo, which imported 3.2 Somali wild ass from Somalia in 1970. This import was, along with a further import of 12 animals from Ethiopia to Hai Bar Reserve in Israel in 1972, the beginning of very successful breeding programmes for this most threatened species of the *equidae*.

Worldwide, only 210 Somali wild ass were recorded in zoological institutions as of the end of 2011, nearly 150 of which were in EAZA zoos. The Somali Wild Ass EEP thus has a special responsibility for the *ex situ* breeding of this species. The population of wild ass in its range countries Eritrea, Ethiopia, and Somalia is unknown, but is estimated to number a few hundred at best. The Somali wild ass EEP is urgently looking for new holders, so that a healthy captive population with a positive growth rate can be maintained.



## DOZEN DRAGONS

BARCELONA ZOO'S FIRST Komodo dragon (*Varanus komodoensis*) was born on 20 April 2012, writes Manuel Areste Gargallo, *Parc Zoologic de Barcelona*, but there were many more to come. The birth came after 202 days of incubation in containers with vermiculite at 30-31°C and, over the following fortnight, 11 further dragons were born from the initial 16 eggs.

The mating between Asmara, aged 5, born at Prague Zoo, and Guntur, aged 8, born at the Gran Canaria Herpetology Research Centre, took place on 11 April with mating sessions occurring over 10 days. Egg laying began at 9:20pm on 2 May and continued until 3:50pm the following day. The female laid the eggs in an underground chamber at a depth of 1m, and then spent six hours covering all the holes that she had dug

during the preceding days. Discovering that the sand from the cave had been levelled and the female had lost over 2 kilos confirmed that the eggs had been laid. As mentioned, a total of 16 eggs were laid in good condition. Of these, two were lost during incubation, one with two embryos inside, and a further pair completed their development but failed to hatch. The dragons that hatched were examined by vets who then treated the umbilical area where necessary. To monitor their growth individually from close quarters, they were weighed, measured and given distinctive markings. The new-born dragons are well and just a few days after hatching were already eating new-born mice. These 12 youngsters will boost the captive breeding plan run by the EEP for *Varanus komodoensis*.

L-R: KOMODO DRAGON (*VARANUS KOMODOENSIS*) PAIR © JORDI FABREGAS; KOMODO DRAGON HATCHING © MANUEL ARESTE TWO KOMODO DRAGON PUPS © JORDI FABREGAS





## Saving the saola

THE EAZA IUCN SSC SOUTHEAST ASIA CAMPAIGN COMMITTEE HAS SELECTED SIX FIELD CONSERVATION PROJECTS AS EXAMPLES OF THE KIND OF WORK THAT WILL BE SUPPORTED BY THE EAZA IUCN SSC SOUTHEAST ASIA CAMPAIGN. THE SIX PROJECTS ARE EVENLY DISTRIBUTED AMONG MOST ASEAN COUNTRIES AND COVER A WIDE AND DIVERSE RANGE OF SOUTHEAST ASIA SPECIES INCLUDING RUFOUS-HEADED HORNBILL AND SUMATRAN RHINOCEROS. THIS ISSUE WE TAKE A CLOSER LOOK AT THE SAOLA CONSERVATION PROJECT OF THE IUCN SSC SAOLA WORKING GROUP.

Mirko Marseille, Executive Coordinator Communications and Membership, EAZA, and William Robichaud, Coordinator IUCN Saola Working Group

The saola (*Pseudoryx nghetinhensis*) was discovered as recently as 1992, in Vietnam (and subsequently found in neighbouring Laos). It was one of the most stunning zoological discoveries of the 20th century. Little has been learned about the animal since, other than that its status since its discovery has deteriorated to IUCN Critically Endangered. It is now one of the most threatened species in Asia. Consequently, the saola's degree of endangerment, its phylogenetic distinctiveness and lack of conservation attention make it a very high priority for support.

Saola are restricted to 'ever-wet'

forest, a habitat within the Annamite Mountains along the border of Laos and Vietnam. Several other new species of larger mammals, birds and numerous other species of fauna (and flora) have been described from the Annamites since the saola (and several species of endemic primate were already known from the area). The saola, however, is the most spectacular of these discoveries, and can therefore serve as a flagship species for conservation of the Annamites and other endemic and threatened species that live there. Saola are threatened mainly by intense levels of hunting in their range (in particular the setting of wire snares, in

the thousands).

The hunting is driven by commercial wildlife trade demand, even though the saola itself has little or no value. The animal is being wiped out largely as bycatch in the pursuit of other, more valuable species. Most endangered terrestrial vertebrates in Southeast Asia are threatened primarily by the wildlife trade, either for bush meat or traditional East Asian medicine (turtles, snakes, pangolins, rhinos, primates, bears, large cats, and more) or, often a combination of both, as 'tonics'. Ironically, saola is one of the only large animals in the region without a significant price on its head. The Chinese never knew about it, and so it does not appear in their traditional pharmacopeia. This provides real hope for the animal's conservation. Unlike, for example, rhinoceroses, determined poachers are not racing conservationists to the last saola. However, the methods used by many poachers for the animals they do seek are not precisely targeted and are incidentally driving the saola to extinction. The most urgent priority therefore is to reduce the level of snaring through increased enforcement patrols in the area. In addition, much more needs to be learned about the saola, in order to target enforcement efforts for maximum effectiveness.

### 26,651 SNARES REMOVED FROM SAOLA HABITAT

In the wild, one of the biggest threats to saola is illegal snaring. Although poachers rarely target saola specifically, the snares they set for other wildlife are not selective. A few years ago, the Saola Working Group brainstormed with our partner the World Wildlife Fund (WWF) on a concept of specially trained and supervised forest guards, hired from local communities, to patrol forests known to contain saola in central Vietnam. The results have been remarkable. From February 2011 to September 2012, the forest guards collected and destroyed 19,593 wire snares. The SWG's partner the Wildlife Conservation Society (WCS) replicated the model in another

key area for saola in Laos. Funding constraints have required WCS's initiative to operate on a more limited scale. Yet in six months of activity between September 2011 and November 2012, the teams destroyed 7,058 wire snares.

That's a total of 26,651 snares removed from saola habitat in less than two years: 26,651 fewer chances of a saola dying! This is the most concrete, on-the-ground result for saola conservation since the species' scientific discovery 20 years ago. And the effort has surely saved many other wild animals from a slow and agonizing death. Funding from the EAZA IUCN SSC Southeast Asia campaign will be used to maintain these good results, and scale them up to other areas.

### ANNAMITE MOUNTAINS

Found only in Laos and Vietnam, the mysterious saola is one of the most endangered large mammals in the world. In Asia, only the two Southeast Asian species of rhinoceros are in similar peril. The importance of saola conservation is heightened by its role as a charismatic 'flagship' for conservation of the Annamite Mountains, where it lives. The dense forests of the Annamites are one of the most remarkable ecosystems in Asia. In addition to the saola, the Annamites are home to many other endangered animals not found anywhere





**ABOVE:** COLLECTING SNARES; VILLAGE SURROUNDED BY SAOLA HABITAT, BOTH © BILL ROBICHAUD, SAOLA WORKING GROUP. **OPPOSITE PAGE:** COMMUNITY FOREST GUARDS PATROLLING ROUGH TERRAIN IN SAOLA COUNTRY IN VIETNAM © HUNG LUONG VIET WWF; SAOLA (*PSEUDORYX NGHETINHENSIS*) © BILL ROBICHAUD, SAOLA WORKING GROUP

else in the world (some of them also only recently discovered). Some examples are: large-antlered muntjac (*Muntiacus vuquangensis*), northern white-cheeked gibbon (*Nomascus leucogenys*), southern white-cheeked gibbon (*Nomascus siki*), red-shanked douc langur (*Pygathrix nemaeus*), grey-shanked douc langur (*Pygathrix cinerea*), black-shanked douc langur (*Pygathrix nigripes*), Francois's langur (*Trachypitecus francois*), Annamite striped rabbit (*Nesolagus timminsi*), Owston's civet (*Chrotogale owstoni*), Chinese three-striped box turtle (*Cuora trifasciata*), Laotian rock rat or kha-nyou (*Laonastes aenigmamus*) and a small, but ecologically important population of Asian elephants (*Elephas maximus*).

The Annamites are also notably rich in endemism of higher plants, birds and fish. With successful conservation of the saola as a flagship species will come conservation of the Annamites, and the thousands of other species there.

## SAOLA CONSERVATION PROGRAMME

With EAZA support, a regional 'Saola Conservation Programme' will be established, based in Laos. The Saola Working Group will take the lead coordination role, and will work with its on-the-ground members and partners in Laos and Vietnam, and internationally. The programme will work across the saola's range, and will be leveraged with additional funding from several other motivated sources.

The immediate focus of the Saola Conservation Programme will be to reduce killing of saola in four key

## Saola Awareness Month: April 2013

All zoos participating in the EAZA IUCN SSC Southeast Asia Campaign are encouraged to host 'Saola Awareness Month' in April this year. The aim of Saola Awareness Month is to focus attention on the campaign with the support of campaign flagship species such as the saola. Whilst the events will be promoted as part of 'Saola Awareness Month' participants are encouraged to select any species that helps to communicate the campaign objectives in conjunction with the biodiversity crisis in Southeast Asia as the focus of their activities. Visit [www.southeastasiacampaign.org](http://www.southeastasiacampaign.org) for more information!

transboundary areas across its range. The first leg of the programme will expand and improve anti-poaching efforts at core areas of these four sites. In the target areas, protection will be expanded through establishment of ranger posts, hiring new rangers, and extensive training and continuing supervision of the new ranger teams.

The second leg of the programme is to learn more about the saola (such as distribution, seasonal movements, and population numbers and trends), so that protection measures can be effectively focused, and their success monitored. Two research programmes will be pursued: first is the collection of potential saola dung, with its identity being verified through genetic analysis. This will be done by training patrol teams and local village cooperators in dung collection and preservation. Genetic analysis will be done by the Research Centre in Biodiversity and

Genetic Resources, based in Portugal. Dung collection is also a key step in the implementation of another priority project – training dogs to detect saola dung, so that we have a reliable, transportable method to survey for the saola throughout its range. But we first need additional samples of saola dung to use for the dog training. The second component of the research programme will be to develop safe telemetry methods for the saola.

Contributions from the EAZA IUCN/SSC Southeast Asia Campaign will support, at least, the first two of three essential steps:

1. Test different types of collars on domestic goats or dogs in Laos to identify the best system for local conditions.
2. Trial capturing and collaring several muntjacs in the same forest that will be used for the saola telemetry study.
3. A radio telemetry study of one or more Saola.



## LEARN MORE

EAZA IUCN/SSC Southeast Asia Campaign: [www.southeastasiacampaign.org](http://www.southeastasiacampaign.org)  
Saola Working Group: [www.savethesaola.org](http://www.savethesaola.org)  
Watch saola conservation movies on the Southeast Asia Campaign YouTube Channel:  
<http://www.youtube.com/user/SEAsiancampaign/featured>



# Tales of the turaco

MOST TURACO SPECIES ARE RELATIVELY EASY BIRDS TO MAINTAIN IN CAPTIVITY BUT THERE ARE STILL A FEW ASPECTS OF HUSBANDRY WHICH NEED TO BE PERFECTED, OFFERING THE DEDICATED KEEPER A FEW STIMULATING CHALLENGES

Louise Peat, Cotswold Wildlife Park, subgroup leader of turaco, under the umbrella of the Toucan and Turaco TAG, studbook keeper of the Red-crested turaco ESB

There are few avian species that can fill a well laid out aviary quite as well as turaco species. Going about their business, they hop from branch to branch, seductively teasing with a brief bright splash of crimson as they open up their wings. With vibrant colours, unique vocals and cheeky characters, they certainly engage attention from visiting public. What more can you ask of an aviary bird?

Turaco species have proved popular both in zoos and private aviculture for many a decade. The family Musophagidae comprises 23 species, of which 18 are currently represented in the European region. Of those 18 species, seven are managed as either European studbooks (ESB) or are monitored.

All species are endemic to Africa. Although the vast majority are not under threat, Bannerman's turaco (*Tauraco bannermani*) is listed as Endangered and Ruspoli's turaco (*Tauraco ruspolii*) as Vulnerable. Of the 18 species in captivity in Europe, Fischer's turaco (*Tauraco fischeri*) is the only species listed as Near Threatened. The rest are listed as Least Concern, but three species are documented as having a decreasing population trend: red-crested turaco (*Tauraco erythrolophus*), Hartlaub's turaco (*Tauraco hartlaubi*) and the purple-crested

turaco (*Tauraco porphyreolophus*).

It is interesting to note that the Bannerman's turaco has only been upgraded from Vulnerable to Endangered in the last 12 years, the main threat being habitat loss from forest fires, forest clearance for agriculture and being hunted for feathers. Their population is decreasing rapidly: food for thought, then, as the same threats apply to both Fischer's and the red-crested turaco. Will they follow in the footsteps of Bannerman's?

There are already conservation actions proposed by BirdLife International for Fischer's turaco including population surveys, monitoring rates of habitat loss and trapping, increasing the number of protected areas, and creating plantations as a source of firewood. There are certainly many opportunities for EAZA members to contribute towards *in situ* conservation.

## WHICH SPECIES SHOULD WE BE INVESTING IN?

While variety is the spice of life, it is time to concentrate our efforts on the fewer more sustainable turaco species, perhaps those whose wild population trends are decreasing: Fischer's (ESB), red-crested (ESB), Hartlaub's (Mon-P)







and purple-crested turaco. Of those four species the purple-crested has a very small captive population size, a total of 12 birds from two subspecies and no breeding success over the last 12 months. Unless further individuals can be sourced this is not sustainable.

The largest and potentially most sustainable captive population is the violaceous or violet turaco (*Musophaga violacea*). This is reinforced by the ESB holder of this species who is especially satisfied with the performance of this species, and states there are still a significant number of founders producing offspring. Although the population status in the wild is stable, this is clearly a worthwhile species to be investing in, and a visually eye-catching species for our aviaries.

Both the green turaco (*Tauraco persa*) and white-cheeked turaco (*Tauraco leucotis*) also have fairly large population sizes and, as such, are very well worth maintaining. The white-cheeked is the easiest species to work with in terms of husbandry; it's certainly the hardest of the species, and a good one to work with to hone those husbandry skills.

In terms of diversity, there are also the grey species, whose husbandry is generally more difficult than the green turaco species. All have very small population sizes and are potentially not sustainable.



**CLOCKWISE FROM TOP:** GREAT BLUE TURACO (*CORYTHAEOLA CRISTATA*) AT COTSWOLD WILDLIFE PARK, NEIL FORBES; WHITE-CHEEKED TURACO (*TAURACO LEUCOTIS*) AT COTSWOLD WILDLIFE PARK, PHIL CLAYTON; NESTING GREEN TURACO (*TAURACO PERSA*) AT ZOO ZLIN, ROMAN HORSKY; LADY ROSS TURACO (*MUSOPHAGA ROSSAE*) AT COTSWOLD WILDLIFE PARK, LOUISE PEAT **OPPOSITE:** RED-CRESTED TURACO (*TAURACO ERYTHROPHUS*) AT WELTVOGELPARK WALSRODE, ANDRZEJ KRUSZEWICZ





However, of the four species in captivity the bare-faced go-away bird (*Corythaixoides personatus*) has five wild born founders still living. It would be interesting to see how many of this species are in the private sector and if there might be the potential to start a programme for this bird from scratch. Husbandry issues would also need to be researched and addressed if there is to be any chance of long-term success.

The last species for consideration is questionable but would have the 'wow' factor for zoo visitors. Birds will never have the same pulling power with our visitors as mammals, as people are drawn to the big, cute and impressive-looking creatures. The great blue turaco (*Corythaeola cristata*) is the closest turaco species we have to this, a stunner of the avian world and the largest of the turacos, coveted by many aviculturists. This species is truly challenging and is the hardest of all turaco species in terms of husbandry. Successes are very few, and hand-reared individuals are generally weak and undersized. There have, however, been recent advances and a couple of collections in the United States have managed to parent-rear individuals. Nutrition may well be the key factor with this species: if this can be resolved there is certainly the potential to justify this bird in our collections. There are currently 13 individuals listed on ISIS in Europe, and the vast majority of these are probably wild-born.

If we wish to maintain the great blue turaco, all holders working with this species need to pool their knowledge and experience and work closely with each other to advance husbandry.

## HUSBANDRY PROBLEMS WITH TURACOS

Despite having been in captivity for decades there is still a great deal we need to learn about the husbandry of turacos: several species are notorious for mate aggression, the nutritional requirements of these species need to be addressed and there needs to be a concerted effort to try to pinpoint the reasons behind poor breeding results.

The vast majority of captive turacos are fed a standard diet of commercially grown fruit, manufactured pellets, greens and seasonal berries, with the majority of the diet being fruit. Wild turacos eat a variety of wild grown fruits, berries, seeds, leafbuds, leaves, flowers and

## CASE STUDY



The red-crested turaco (*Tauraco erythrophus*) was accepted as an ESB in 2006, writes Louise. It is endemic to Angola and is classified by the IUCN as Least Concern, but with a decreasing population trend as a result of on-going habitat destruction.

The first birds were exhibited at ZSL London Zoo in the late 1920s, and bred for the first time by the Durrell Wildlife Conservation Trust (formerly Jersey Zoo) in 1974. This species is equally popular in private aviculture, and birds have passed between private and public collections for as long as the species has been held in captivity.

Accurate analysis, however, is difficult for this population with only five traceable founders and just short of 40% known pedigree. All efforts to trace the origins of some of the birds are proving a rather fruitless task. On a more positive note, though, there has been a dramatic increase in breeding success, with more institutions breeding successfully than previously recorded since the ESB was established: a total of 43 births in 2012.

Over the last six years any husbandry issues or concerns that have been highlighted by holders have been researched by the ESB. Current ongoing research includes: nutrition, aggressive behaviours and management of juveniles. The long term goals of the ESB are to have a stable population for display and education, husbandry research and most importantly as ambassadors. Work is underway to try to get this species officially recognised as the national bird of Angola, with the potential to become an important emblem for all future conservation in Angola, including for several endangered endemic avian species: Gabela bushshrike (*Laniarius amboimensis*), Gabela akalat (*Sheppardia gabela*), Pulitzer's longbill (*Macrosphenus pulitzeri*), and Monteiro's bushshrike (*Malaconous montei*).

In 2010 several red-crested turaco holders raised funds towards a survey of the wild population in the Kumbira Forest, Gabela, Angola led by Michael Mills. A total of 2,679 euro was raised by holders and used to purchase a vehicle for future field work. As I write, Aimy Caceres, who is doing a PhD at the Centre of Biodiversity and Genetic Resources (CIBIO) of the University of Porto, Portugal, is using the vehicle whilst doing her research in Angola studying the effects of deforestation and forest degradation in the endemic birds of the central Angolan Scarp. The vehicle has been well and truly tested – Aimy managed to get it stuck in the mud and was rescued by a passer-by laden down with bananas!

The current captive population stands at 157 individuals in 48 institutions. New holders are now being sought to get involved with this eye-catching species. If you've room in your collection (and in your heart) do get in touch with the ESB.

Finally, I would very much like to draw attention to all the help and support this ESB has received from the holders over the years. I never cease to be amazed by the level of commitment, cooperation and lovely words of encouragement that find their way into my inbox. It is only because of you all that this ESB has come so far.

With thanks to the following institutions that have supported the 2010 survey in Angola: Banham, Bela Posci, Bird World, Cotswold Wildlife Park, Dublin Zoo, Harehatch, Harewood Bird Gardens, International Turaco Society, Living Rain Forest, Papiliorama Swiss Tropical Gardens, Paradise Park (HAYLE), Paultons Park and Twycross Zoo.





RED-CRESTED TURACO (*TAURACO ERYTHROLOPHUS*), PHIL HOMER

some insects; some species are more folivorous than others, and some have a greater interest in live food.

Nutrition is key to the health, productivity and longevity of our birds. It is important to know if we are getting it right. Some research is currently underway to try to ascertain if improvements can be made.

Nutrition could also be one of several factors towards the problems with mate aggression. Individuals not in full health or breeding condition may not be as willing to cooperate with partners, resulting in frustration and aggression. More research needs to be done on cases of mate aggression to try to establish any trends, such as health, physical and mental maturity or environmental factors.

Management of juvenile birds is an area which also needs deliberation. All too often, young birds are paired up ready for the following season,

and although many turaco species are physically able to breed after a year, we need to ask ourselves whether or not they're mentally mature enough to do the job well. By pairing them later in life, could this have a positive influence on breeding results and potentially reduce aggressive encounters?

If we wish to secure the future of turaco species in our collections over the long term, closer management is essential. Looking at data taken from ISIS species holdings, breeding results are somewhat concerning. Of the 18 species documented on ISIS, 13 have populations of fewer than 30 individuals and, of those, seven species have failed to breed in the last 12 months.

The data taken from ISIS species holdings is by no means definitive. There are several collections holding turaco species who are not ISIS

members and many more birds are held by private aviculturists.

Over the years, many zoo birds have been exchanged back and forth with private aviculturists, and during the process the origins of some individuals have been lost. It is now proving difficult to trace pedigrees of certain individuals. This again is cause for concern: our populations may be becoming inbred, putting our birds at risk of genetic weaknesses. There's all the more need, then, to take decisive action and manage the species we wish to maintain in our collections.

To sum up, no bird collection would be complete without turacos. They are true feathered gems both to visitors and keepers – a challenging and rewarding family to work with, and visually stunning.

For more information contact Louise Peat by emailing [records@cotswoldwildlifepark.co.uk](mailto:records@cotswoldwildlifepark.co.uk)

# Simplified guidelines

A NEW LOOK FOR EAZA'S POPULATION MANAGEMENT POLICIES, PROCEDURES AND GUIDELINES - THE EAZA POPULATION MANAGEMENT MANUAL - IS BEING LAUNCHED

Christina Henke, Executive Coordinator Collection Coordination and Conservation, EAZA ,  
Danny de Man, Manager Collection Coordination and Conservation, EAZA

Since 1985 European zoos have been collaborating and managing animal populations in breeding programmes such as EEPs (European Endangered Species Programmes) and ESBs (European Studbooks). When EAZA was formally established in 1992 rules and procedures followed on how to manage populations within the EAZA framework.

Since the formal establishment of EEPs in 1985 and their integration with EAZA in 1992, the number of rules, regulations and policies addressing the challenges breeding programmes face has necessarily grown.

In order to add more transparency to EAZA's animal management-related policies, a key action was taken by the EEP Committee with the decision to collate all documents regarding breeding programme management in one document – the EAZA Population Management Manual. A working group was established to review all policies and to come up with fresh ideas on how to reduce bureaucracy where possible. After reviewing eight versions, the Population Management Manual was officially approved at the EAZA Council meeting in Innsbruck in September 2012 and is now ready for release.

Within the process of compiling the EAZA Population Management Manual the working group realised that some rules had to be updated and revised. This article provides a summary of the key changes to EAZA's breeding programme management rules and regulations.

Firstly, the definitions for EEPs, ESBs, Mon-P and Mon-T were reviewed and clarified. While the EEP remains the most intense level of management for a species, the status of and criteria for ESBs, Mon-Ts and Mon-Ps has been more clearly defined. With regard to EEPs, a change has also been made in the matter of seats on the Species Committee; it is now acceptable to have fewer seats on the committee if not enough volunteers are available, and Species Committees for species that are taxonomically similar and that face similar population management issues are encouraged to cooperate



**Policies, procedures and guidelines that will be incorporated and/or superseded by the EAZA Population Management Manual**

- EAZA guidelines for decision making 'Importation of Wild caught EEP species'
- EAZA Statement about import of birds or eggs from the wild
- EAZA guidelines on conservation funding through EEPs
- EAZA guidance on institutional collection planning
- EAZA Policy on animal Record Keeping
- EAZA Position statement on ownership of studbook data
- EAZA Statement against the import of squirrel monkeys
- EAZA Statement on European studbooks
- EAZA Statement on Invasive Species
- EAZA Statement on selling and trading EEP animals
- EAZA Recommendation on Surplus and Broker/Dealer involvement
- EAZA guidelines on animal transfers between regions
- EAZA decision on EEP participation consequences for zoos leaving EAZA membership.
- EEP Participation Procedure
- EEP Participation Manual
- EEP Working Procedures
- ESB Working Procedures
- ISIS Data Cleanup guidelines
- IUCN Guidelines on the Management of ex situ Populations for Conservation
- IUCN/SSC Guidelines for Reintroductions

with each other. In addition, approved non-EAZA EEP participants can vote in the Species Committee election process; furthermore they can be elected onto the Species Committee as long as at least 2/3 of the seats are taken by EEP participants from full members of EAZA. Additionally, in order to improve the effectiveness of the organisational structure of TAGs, terms of office (equating to two terms of five years) have been implemented for TAG chairs.

## ONGOING EVALUATION

Additionally, to ensure quality within breeding programmes, both TAGs and EEPs will be evaluated from 2013 onwards. For EEPs this is the second round of evaluations. The first round has, for example, helped make gaps in communication or lack of publications apparent and therefore helped improve the management of populations on an EEP level. From 2013 onwards the evaluations will also look more closely at the populations themselves, and population viability analyses will be carried out. The aim is for 35 EEPs to be evaluated each year in order to finalise the second EEP evaluation round by 2017. The evaluation schedule and summarised results will be made available on the website.

Another significant change has been made regarding the publication of Husbandry Guidelines. EAZA Husbandry Guidelines will be renamed EAZA Best Practice Guidelines. Guidelines, or manuals following the new terminology, that are published and approved as according to the described procedure in the Population Management Manual will be published on the public area of the EAZA website. The open publication of these manuals will help transfer expertise and knowledge from the EAZA community into the wider world and therefore help support the furtherance of animal welfare.

The EAZA Population Management Manual will be launched on the member area of the EAZA website. For further information, please get in touch with the CCC department via [christina.henke@eaza.net](mailto:christina.henke@eaza.net).





# DIANA PLANNERS

OVER THE LAST 38 YEARS, OSTRAVA ZOO HAS BEEN  
PERFECTING THE ART OF KEEPING DIANA MONKEYS

Jana Kanichova, Head Keeper, and Jana Pluhackova, Curator, Ostrava Zoo



Ostrava Zoo has been keeping Diana monkeys (*Cercopithecus diana*) since 1975, when 4 (2.2) individuals were brought in to the zoo. However, only two of these very young animals (approximately 2-3 years of age) laid the foundations of Diana monkey breeding in Ostrava – the male Din and the female Diana. Their first offspring was born and reared in 1977, and they went on to have a total of five young (4.1), all of them parent-reared. Their only daughter, Oka, became a very successful mother herself after her departure to Leipzig Zoo, and is the oldest breeding female in the EEP after giving birth at the age of 26.

Afterwards, Diana monkey breeding in Ostrava stopped for several years. One of the main reasons for this was the obesity of our breeding male at the time, Dan (16 years) who weighed nearly 14kg. As it was not possible to control his food intake in the group, we separated Dan for five months until he slimmed down to 8kg. His diet at that time consisted of branches, 200g of vegetable and 50g of fruit per day. Four months later he successfully mated with all females. In total, Dan had three (1.2) surviving offspring. Both his daughters, Sassandra and Sulima, formed the basis of our present groups.

In 2006, a new breeding male Samson (13 years) arrived from Chessington. We have applied a new approach towards his integration into the group using two neighbouring enclosures (one for male, one for females) communicating via a smaller cage installed inside the females' enclosure.

The male can choose to be alone or to visit the smaller cage to get into contact with the females whenever he wants. When animals are not acting in an aggressive way, it is the right time to put them together. Samson was allowed to join the group after two months and left five (1.4) living offspring.

After Samson's death in 2008, we decided to leave our females without a breeding male. The reason for this was the presence of several young in the group, making the risk of infanticide too high.

In September 2010, the group split into two. Sassandra (9 years) and her young Tafire (a female of 3.5



#### History of Diana monkeys at Ostrava Zoo

Import	7.2.0
Born at zoo	10.14.6 (2.4.2 DNS)
Death	1.3.0 (of born at zoo)
	3.2.0 (of imported)
Departure	5.1.0 (of born at zoo)
	3.0.0 (of imported)
Current state	3.6.4 (two groups: 2.3.2 and 1.3.2.)
In total	17.16.6 individuals till 1.1.2013

#### WHAT HAVE WE LEARNT?

- Food should always be spread all over the enclosure
- Do not let your animals become fat
- Intervention in terms of hand feeding to support submissive individuals is not recommended. Such 'help' increases stress and risk of injury
- When moving Diana monkeys, a minimum of two females (mother with daughter or two sisters) should be transferred as related females form a basic unit of the group
- A thorough and detailed introduction should precede a mixing of the group. Once mixed, animals should not be separated. Giving them enough time and space without blank corners is more helpful than intervention from keepers
- No hand-rearing is recommended
- If females do not breed for several years, do not wait too long and bring in a different male
- Keepers should interfere as little as possible. The best enrichment is a functioning group with the young.

years), Komoe (female, 2.5 years) and Tuwai (male, 1.5 years) moved to another enclosure in the primate house to give Tuwai a little bit more time to grow up. Sulima (8 years) with her young Kenema (female, 3.5 years) and Nassia (female, 2.5 years) were put together with a new male Gola (22 years) after six days of introductions. Unfortunately, Gola died 18 months later due to a tumour on the kidneys. In this short time, he managed to sire four (2.0.2) offspring, two of them born in 2012, five months after his death.

In October 2011, after the departure of Tuwai for Salzburg, Sassandra's group also received a new breeding male called Charlie (13 years). Since then, Charlie has mated with all females having two (0.0.2) living offspring in 2012 so far.

To sum up, Ostrava Zoo has brought in seven adult males, of which five have reproduced. The sixth male to have young originated in Ostrava. Since 1975, 11 females have bred in Ostrava Zoo giving birth to 30 offspring with 22 (8.10.4) surviving until adulthood. Four of these were born in 2012 representing the fifth generation of Diana monkeys born at Ostrava Zoo. Currently, the zoo houses 13 Diana monkeys, forming the biggest group of this species in Europe and the second biggest in the world.

We would like to thank the whole team of zookeepers and other colleagues that look after this species in Ostrava Zoo.





# The power of four

**EAZA's new four-year strategy has been launched, and it reveals some exciting ambitions for us all**

Simon Tonge, Chairman, EAZA

The EAZA 2009-2012 strategy could be called, I think, a success. Much of it was achieved and a final review document of this previous strategy will be added to the members' area of the website in the near future. Not all has been completed, and some outstanding items remain, but I think we can as a community feel we have made good steps forward. But the thing about strategy is that it should not stand still, it cannot be the same for 10 or 20 years, it needs to evolve with the community it is serving. If we are to be the best association we can be it also needs to respond to the changing world around us. With this in mind in 2011/2012 the association undertook a strategic planning exercise that involved a wide range of the membership.

At the 2011 annual conference postcard surveys were handed out asking delegates to let us know their thoughts on the previous strategy and to give their priorities on the draft aims that Council and the EEO had already identified. This was

**You may feel that this strategy is not relevant to day to day life – just one more thing to think about when you should be getting on with things. I hope not, but if so I leave you with one quote that hopefully might pique your interest. I may not agree with his politics, but it's a thought-provoking quote:**

**'You may not be interested in strategy but strategy is interested in you'** LEON TROTSKY

followed by a strategy meeting of the education committee in early 2012 that developed ambitious plans for our educational future. These education targets were then brought to a two-day strategy meeting for Directors of EAZA institutions hosted by Munich Zoo in April 2012. The two days were facilitated by Andrew Acland from Andrew Acland & Associates, a professional facilitation and mediation company, and we thank him for his help and insight throughout the

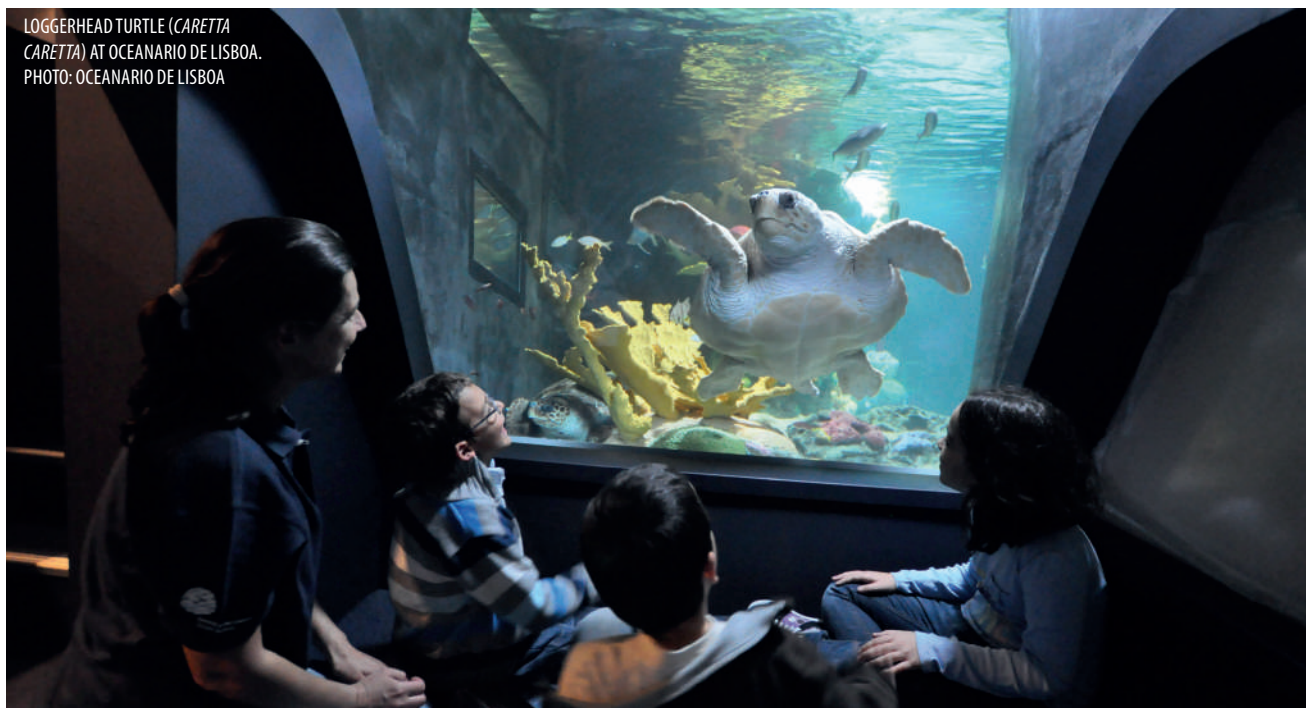
process. These two days of intensive meetings resulted in dozens of A3 sheets of papers and hundreds of ideas that the EAZA Executive Office carefully collated into a report of the event that was then circulated to all participants. From some additional thoughts stimulated by the report the office team then put together a draft strategy that was circulated to all participants from the meeting and to EAZA Council members. From their comments a final draft was delivered to EAZA Council and formally approved in Innsbruck, with a few small changes.

We were very pleased when our colleague Julia Marton-Lefevre, Director General of the IUCN, provided a foreword for the new strategy, which demonstrates the place of modern professional zoos and aquariums as part of the larger conservation community. The EAZA 2013-2016 strategy is now available on the public area of the website and the detailed action lists are available on the Members Area. I would urge you to read this document and its accompanying action list in detail but I would like to take the opportunity to give you a brief overview of what you will find. The following headings in bold are our main aims and give a flavour of the strategy document.



EAZA ACADEMY COLLABORATION WITH SHAPE OF ENRICHMENT, ENRICHMENT TRAINING IN HUNGARY. PHOTO: EAZA

LOGGERHEAD TURTLE (*CARETTA CARETTA*) AT OCEANARIO DE LISBOA.  
PHOTO: OCEANARIO DE LISBOA



## INFLUENCING POLICY AND ENHANCING ENGAGEMENT AT THE EU

As we are all aware, the EU impacts directly on the work of EAZA, be it through regulations, policies or strategies. We must be mindful that our work can not just meet EU legal requirements but must also lead to the fulfilment of actions or strategy points of importance to the EU. The EU and the Commission are there not only to regulate our work via mechanisms such as the EU Zoos Directive (1999/22/EC) but to receive information from us that could be of assistance. To help the EU and Commission know about what good zoos actually do we will keep supplying them with the information they need. As individual EAZA members in EU member states it is also very important that you communicate with the Members of the European Parliament in your country. We have significant skills and expertise to offer the Union – let's make sure we continue to do so for the benefit of nature.

## MAXIMISING THE CONSERVATION ACTION OF OUR MEMBERS

With the world around us at increasing risk from habitat loss, habitat fragmentation and other threats we know we have to keep upping our game when it comes to conservation. Collectively we can be a powerful source for conservation action, be it via our *ex situ* programmes, our education activities, or in the wild at our field programmes. Throughout the last few years' editions of *Zooquaria*

there have been numerous articles about the conservation actions of EAZA members, both here in Europe and globally, and in the conservation database there are hundreds of projects listed – and we would urge you to add even more as we know that you do even more. We will be evaluating our *ex situ* programmes and seeing where they can be further enhanced and we hope that all EAZA members will take the time to join forces with the UN Decade of Biodiversity by signing up as partners.

## DEVELOPING CONSERVATION LEARNING AND ENGAGEMENT FOR THE FUTURE

As part of the aforementioned UN Decade of Biodiversity, EAZA is committed to seeing how it can help address the Aichi 2020 Biodiversity targets and Target 1, which asks that all citizens care about biodiversity and act to save it, is a perfect foil for what we as zoos and aquariums can achieve. Elsewhere in this edition of *Zooquaria*, Sarah Thomas (Acting Chair of the EAZA Education Committee) outlines her views about the approach to this target and demonstrates the depth of thinking about how we should tackle learning and engagement in our visiting public (see p22). We have set particularly challenging goals around this Aichi target and will need the ideas and enthusiasm of all to achieve them. We will also launch our new Journal of Zoo and Aquarium Research this year – an online, free access forum, designed to allow all zoos, no matter where they are based or their ability

to pay, to access high quality research. We decided to do this as part of our existing commitment to outreach as well as because of our belief in the need to ensure that good quality research is properly disseminated.

## LEADING IN ZOO ANIMAL WELFARE

We all are aware that when visitors come to a zoo they do so trusting that the zoo is acting in a way that safeguards the animals in its care. We also know that the most common and aggressive tactic of anti-zoo animal rights groups is to portray zoos and aquariums as untrustworthy with the care of animals – that for some reason the thousands of staff of EAZA institutions who devote their lives to caring for animals do so for unknown but malevolent reasons. Ridiculous, as we know. But it is also true that we must be vigilant at all times and that of course we shouldn't stand still, but continue to strive to learn more and more about the lives we care for and to ensure that we continue to know how best to look after these animals. We have many allies who are willing to help us in this regard, including animal welfare experts at universities and serving as staff throughout our zoos. We will also continue with our existing mentoring work through the Candidate for Membership programme.

We will of course also be looking at how we undertake the work detailed above, with whom best to partner, and how we can work as sustainably as possible and your input is urgently needed.



# Cleaning up our message

IF ZOOS AND AQUARIUMS REALLY WANT TO ENGAGE VISITORS' INTEREST, THEN LANGUAGE IS THE PLACE TO START

Sarah Thomas, Head of Discovery and Learning, Zoological Society of London

In an EAZA member institution a sign can be seen next to a tank of giant African land snails. It reads: 'These are hermaphrodites, they reproduce prolifically'. It's factually correct, but emotionally cold and intellectually exclusive. This sign is symptomatic of how EAZA zoos and aquariums often construct their own barriers when trying to communicate with their visitors.

As we approach the quarter-way point in the United Nations 'Decade of Biodiversity', EAZA educators continue to battle with engaging the public in conservation. But it's not easy as many of the words we use in our communications are confusing, complicated and buzzwords only understood by industry professionals.

Take the word 'biodiversity' – a classic example of where trying to communicate with the public fails. In a UK survey by DEFRA in 2010, a third of the participants had never heard of the word and, more worryingly, a common response was 'is it a type of washing powder?' Yet we've had a year devoted to biodiversity, and now a decade. From the DEFRA survey results, does this suggest a good proportion of the UK population think we have a whole decade dedicated to cleaner clothes and brighter whites?! And it doesn't stop at biodiversity – educators often face difficulties when trying to engage people with terms such as ecosystem services, natural capital and ocean acidification to visitors who only came to the zoo to get some fresh air and see the penguins.

As part of the decade of biodiversity, one of the Aichi targets more relevant to EAZA educators is target 1: 'By 2020, at the latest, people are aware of the values of biodiversity and the steps they can take to conserve and use it sustainably'. How can we get people to be aware of the values of biodiversity, if they don't know what the word biodiversity means? Essentially, our assumptions of our audiences' knowledge and understanding of conservation concepts is flawed. If we are to succeed in engaging people in advocacy and action, we need to spend less time using confusing vocabulary and more effort finding out about who they are, what they understand and



what drives and motivates them to act.

The term biodiversity has been around for about 30 years and there are still several working definitions. It strikes me that if professionals can't decide what biodiversity means, then how are we going to effectively communicate it to our visitors? Some educators now argue that we should revert back to using the word 'nature' instead of biodiversity, a word that has been around for thousands of years and has much better recognition from the general public. Science professionals have deemed the word too subjective, value-laden and unmeasurable. However, in zoo education, *values* play a key role in how we can foster the connections between people and the natural world. We shouldn't be frightened of using words that evoke an emotional response in our visitors and, yes, it might be subjective and unmeasurable, but then so are art, music and literature – although it doesn't make these any less important to our lives.

## PASSING THE MESSAGE ON

So how can EAZA zoos and aquariums move forward into the next quarter of the Decade of Biodiversity to produce simple action-oriented messages that will make people aware of the values of biodiversity/nature? A good question indeed. The famous Baba Dioum quote references being taught about what to conserve: 'In the end we will conserve only what we love. We will love only what we understand. We will understand only what we are

taught.' I struggle with this info-centric idea of visitors needing to be taught information in order for them to act and to conserve. In my rewording of the quote (below), I believe emotion and experiences should come first when talking about conservation. 'In the end we will conserve only what we care for. We will care for only what we connect to. We will connect to only what we experience.'

EAZA's new strategy embraces this concept by stating that it aims to 'maximise the potential of all EAZA members to champion conservation learning and engagement'. This vision will be realised through the following sub-aims: to ensure a greater level of biological literacy, evoke positive behavioural change, inspire the public and other stakeholders on how to care for individual animals, for species and for the planet; and establish a quality framework for all aspects of education in zoos and aquariums. These new aims are challenging and ambitious, placing many European zoo educators out of their comfort zones, but in light of the current environmental crisis, this is exactly where public engagement in conservation should be repositioned.

When thinking about engaging with our visitors, we should endeavour to increase the ecoliteracy of our audiences, but we need to think carefully before using words that obstruct and confuse the pathways to communication. Clear language and focused emotive experiences could unlock the potential of our visitors to ultimately care for and value nature.

# Helping the medicine go down

A NEW DEVELOPMENT IN ZOO MEDICINE EDUCATION SHOULD HELP EUROPEAN VETERINARIANS IMPROVE THEIR QUALIFICATIONS



Mads Bertelsen, Centre for Zoo and Wild Animal Health, Copenhagen Zoo

The knowledge within zoological medicine is growing fast; new techniques allow us to anaesthetise endangered species more reliably and safely, preventative health programmes reduce the number of sick animals – and the cost of treating them – assisted reproductive techniques advance breeding programmes, and so on. Similar advances are taking place within every other field of veterinary medicine. The veterinary schools provide a foundation, but post-graduate specialisation must follow. Further, while new graduates possess great skills in domestic animal medicine, they are typically ill-equipped for zoo animal medicine. In the meantime, great zoo veterinarians with vast experience are retiring without transferring their knowledge to future generations. How do we bridge that gap to ensure the best possible veterinary care for our collections?

North America has taken the lead in the development of veterinary specialisation in zoological medicine. In 1983, the American College of Zoological Medicine (ACZM) was established under the auspices of the American Board of Veterinary Practitioners (ABVS). The goal was to advance veterinary care of zoo and wild animals. In partnership with leading zoos, the college has set up educational programmes to promote excellent education in zoological medicine, and the ACZM currently has 149 members.

The European College of Zoological Medicine (ECZM) was established in 2009 through an adaptation of the existing European College of Avian Medicine and Surgery. This college comprises the fully recognised avian specialty and the provisionally recognised specialties of small mammal medicine, herpetological medicine, wildlife population health, and zoo health management.

Of the five specialties, zoo health management is the one primarily relevant to zoos, as it is a discipline-based specialty designed to cater to the varied specialised tasks of a zoo veterinarian, ranging from preventative medicine to anaesthesia. Zoos should be very interested in the

new specialty for two reasons:

- by offering a residency position, zoos demonstrate their dedication to high quality animal care, establish a research platform, and increase their veterinary staff in a relatively affordable way, all at the same time;
- for the users of specialised veterinary services (in this case the zoos), the specialty system, once established, is a simple means of identifying high quality candidates for veterinary positions.

## WHAT NEEDS TO BE DONE?

Over the coming decades, the ECZM (zoo health management) can be an important factor in improving veterinary care in zoological collections. For this to happen, a group of established 'specialists' need to step forward and establish educational programmes

in partnership with zoos. Following provisional recognition of a college there is a five-year period in which such individuals may enter without going through a residency programme and subsequent exam. The college needs dedicated individuals with a strong practical and scientific background to consolidate the specialties and to set up residencies to educate the future generations of zoo veterinarians. For the ECZM (Zoo Health Management) specialty this period expires in 2017. Please refer to the ECZM website ([www.eczm.eu](http://www.eczm.eu)) for the details.

The next step is the development of residencies, either by individual zoos or by consortiums of institutions sharing the expense and benefits. A realistic goal would be the establishment of five residencies within the next five years.



MALAYAN TAPIR RECEIVES A TETANUS VACCINATION IN COPENHAGEN ZOO. © COPENHAGEN ZOO.

## SPECIALIST TERMS

The structure around veterinary specialisation can be briefly described as follows:

- a board of veterinary specialisation governs a variety of different colleges, each representing a distinct area of veterinary medicine;
- members of a college are referred to as diplomates;
- the college defines criteria for inclusion of diplomates, including professional activity, publications and examinations;
- most importantly, each college defines a structure for training positions referred to as residencies. A residency is typically of three years duration, and consists of clinical work, research activities and scientific study. During the residency, the resident is closely mentored by an established diplomate of the relevant specialty. Within the European Board of Veterinary Specialisation (EBVS), 23 specialties exist, including the relatively newly established European College of Zoological Medicine (ECZM).



# The culture of agriculture

AN EDUCATIONAL FARM AT DUBLIN ZOO HAS WON A SPECIAL EUROPEAN AWARD

Vanessa B Woods, Agri Aware, and Una Smyth, Dublin Zoo

Situated in Dublin Zoo with over a million visitors per year, Family Farm is an interactive learning space for young and old and a great attraction for all visitors. It is an educational hub that communicates the importance of Irish farming and the Irish agri-food industry to the visiting public, in terms of food origin and quality, food security, sustainability, biodiversity, animal welfare, environmental standards and the key contribution of agriculture to the Irish economy. And now, Agri Aware, the Irish agri-food educational body that developed Family Farm with Dublin Zoo, has been awarded the European Commission's 'CAP 50 (Common Agricultural Policy) Communication Award' for the venture.

Family Farm was Agri Aware's first joint venture with Dublin Zoo and it was opened in 2010, replacing Dublin Zoo's former 'Pets' corner' at a cost of €1.2 million. Agri Aware is a charitable trust with a mission statement to 'improve the image and understanding of farming and the agri-food industry among the general public', and the development was supported by Bord Bia, FBD, Irish Farmers Association (IFA), IFAC and Dublin Zoo.

The European Commission's 'CAP 50 Communication Awards' is part of a series of initiatives to mark the 50th anniversary of the CAP. Open to professional communications agencies, general and specialised media, NGOs and public administrations, the awards are divided into four categories: communication to the public; communication to stakeholders; innovative communication; and EU co-financed actions.

The top EU communications award was presented to Agri Aware in Brussels by the European Commissioner for Agriculture, Dacian Ciolo, to recognise best practice in communicating the CAP to the public. Agri Aware's submission on Family Farm was shortlisted from some 118 entries from 21 countries across Europe.

In Family Farm, visitors of all ages can see and learn about the farm



animals and farming life. They see and find out about cattle, sheep, pigs, poultry, goats and crops. Family Farm's heritage exhibition provides an opportunity for visitors to engage with Ireland's agricultural history, through interactive touch screen displays, photographs and video footage. The state of the art Farmhouse classroom is also a hub of interactive learning, where students engage with and learn from curriculum-linked accredited educational programmes focused on the local food system. These hands-on interactive experiences promote active learning for students to broaden their knowledge of farming and food production.

For the million annual visitors to Dublin Zoo, in particular for those from an urban background, Family Farm is a hugely influential resource, which offers a valuable insight into Irish farming life. As one member of the European Commission's 'CAP 50 Communication Awards' jury put it:

'[It's] the CAP meets the elephant – in developing a farm at the Zoo, this original idea raises awareness of agriculture among an urban audience. It's a best practice example of reaching the new generation in an engaging way.'

Agri Aware has welcomed the award with their partners in Dublin Zoo. Agri Aware's Chairman, Bernard Donohue, said that all involved were delighted with the win, which was a huge and welcome achievement. 'Family Farm has gone from strength to strength since its opening in 2010,' he says, 'and it is continuing to grow in popularity. Since its opening, Agri Aware has delivered numerous interactive educational programmes in Family Farm, with a full calendar of events to communicate the Irish agri-food industry planned for 2013.'

For further information on Family Farm, developed by Agri Aware and Dublin Zoo, visit [www.familyfarm.ie](http://www.familyfarm.ie), [www.agriaware.ie](http://www.agriaware.ie), [www.dublinzoo.ie](http://www.dublinzoo.ie), Facebook and Twitter.





**CLOCKWISE FROM LEFT:** AT THE LAUNCH OF AGRI AWARE'S DAIRY MONTH IN FAMILY FARM IN SEPTEMBER 2012 WERE STUDENTS FROM A SCHOOL IN DUBLIN CITY, WITH BELLA THE COW; CHILDREN ENJOYING THE FAMILY FARM ; AT THE LAUNCH OF FAMILY FARM'S FIRST BIRTHDAY CELEBRATIONS IN DUBLIN ZOO IN 2011 WERE (L-R) SEUMAS O'BRIEN (CHAIRMAN IFAC), AIDAN COTTER (CEO, BORD BIA), BERNARD DONOHUE (AGRI AWARE CHAIRMAN), JOHN BRYAN (IFA PRESIDENT), LEO OOSTERWEGHEL (DIRECTOR, DUBLIN ZOO), MINISTER SIMON COVENEY TD WITH HIS DAUGHTER BETH, DR. VANESSA WOODS (EXECUTIVE DIRECTOR, AGRI AWARE), CONOR GOULDSON (COMPANY SECRETARY, FBD) AND WILLIE FAHEY (CEO, IFAC).







# SPACE INVADERS

A NEW VOLUNTARY CODE FOR ZOOS AND AQUARIUMS HAS BEEN DRAWN UP TO ADDRESS THE ISSUE OF INVASIVE ALIEN SPECIES

Lesley Dickie, Executive Director, EAZA

Invasive alien species (IAS) have long been known to be a significant threat to species conservation. The IUCN Invasive Species Specialist Group, for example, has noted that, of 680 known animal extinctions, 20% have been due to IAS. This threat has been highlighted in the recent Convention on Biodiversity Aichi Targets, specifically under strategic goal B (Reduce the direct pressures on biodiversity and promote sustainable use), and Target 9 (see box).

We tend to consider IAS to be most threatening to island species and this is indeed true, as island species have characteristics that make them particularly vulnerable to the impacts of alien invaders. But even our large continent of Europe is not immune, and a recent report – The impacts of invasive alien species in Europe – by the European Environment Agency estimates that there may be up to 10,000 alien

## WHAT IS TARGET 9?

This states that, by 2020, invasive alien species and pathways are identified and prioritised, priority species are controlled or eradicated, and measures are in place to manage pathways to prevent their introduction and establishment.

species present in Europe today. Whilst the majority do not cause any significant effects it is estimated that 15% of these species will negatively impact the European environment, in a number of focal areas; species, economy, ecosystems and human health. The same report noted that the economic impact on Europe due to IAS totals at least 12 billion euro each year.

The EU has adopted Target 9 of the Aichi targets in its new Biodiversity strategy and is seeking to implement a legislative framework regarding IAS to fill existing policy gaps. EAZA

is paying close attention to such developments as any such legislation must ensure that it does not hinder the role of zoos and aquariums in the EU in nature conservation, as mandated under the EU Zoos Directive (1999/22/EC). However, zoos and aquariums must also bear in mind that they have a moral and legal responsibility (under Article 3 of the Zoos Directive) to ensure that they do not allow escapes from their facilities and if escapes do happen that all available options are explored and thereafter implemented to negate the escapes and prevent the species becoming invasive.

Zoos and aquariums are noted as low risk in this regard in comparison to other sectors (pet industry, farming, notably fur farming, horticulture etc), however, low risk still denotes some risk and we must as an EAZA community remain vigilant about this issue as there are examples where zoos and aquariums



**MAIN PIC:** EUROPEAN MINK  
(*MUSTELA LUTREOLA*), © TIIT MARAN,  
TALLINN ZOO **INSET:** RUDDY DUCK  
(*OXYURA JAMAICENSIS*) © YVES  
THONNÉRIEUX

is the European Code of Conduct on Zoological Gardens and Aquariums and Invasive Species. The new code was presented at the recent standing committee meeting of the Bern Convention on 30 November 2012 and was formally approved, meaning that this voluntary code is applicable to all countries of the Council of Europe. The meeting adopted recommendation No 161 (2012) that asks, amongst other things, all contracting parties of the Bern Convention to:

- draw up national codes of conduct for zoological gardens and aquariums on invasive alien species taking into account the European Code of Conduct;

With the framework in place what does this new Code of Conduct ask of zoos and aquariums? Five recommendations have been identified:

- adopt effective preventative measures to avoid unintentional introduction and spread of IAS;
- take into account the risks of IAS introductions in all wildlife and habitat management projects;
- proactively engage in awareness raising and outreach activities focusing on IAS and their impacts;
- adopt best practices for supporting early warning and rapid response system for IAS;
- be aware of all relevant regulations concerning zoological gardens and aquaria and IAS.

For each of these recommendations further detail is given in the full text of the Code which is available on the EAZA website and I would urge all members to take time to read the code and see how it can be applied in their zoos, aquariums and regions.

In addition we should also as zoos and aquariums highlight where we have helped in the fight against invasive species. A notable case is the work of zoos in breeding European mink (*Mustela lutreola*) for release as part of a coordinated programme that has benefited from EU LIFE+ funding. European mink have declined by up to 70% in a just a few decades and it now occupies less than 10% of the area it once covered. Although habitat loss and degradation has played a role in its decline the main driver has been the invasive American mink (*Neovison vison*), which were extensively used in fur farming and either escaped or were deliberately released by animal rights activists. European mink, bred at Tallinn Zoo, an EAZA member in Estonia, were part of a release aiming to support an island sub-population on Hiiumaa Island in western Estonia. Much has been learned from this pilot project which can be applied to future projects and this is an excellent example of where conservation breeding efforts in zoos can assist as part of the recovery of a European species threatened in the wild by an invasive species.

EAZA would like to work further with the IUCN SSC Invasive Species Specialist Group in continuing to 'build bridges' between the zoos and aquarium community and specialist groups in an effort to enhance conservation outcomes for species in Europe and beyond.

have let animals and other organisms escape into the environment, where they have become invasive. Our own policies and standards require strict control of the risk of escapes but our rules apply only to EAZA members, not facilities outside of our membership. Given that we are committed to helping the EU and beyond implement the Aichi targets for 2020 how can we assist in delivering Target 9?

In 2012 EAZA was approached by the IUCN SSC Invasive Species Specialist Group (ISSG), which was drafting a number of voluntary sector codes of practice in relation to the threat of IAS and was asked to participate in their drafting and endorse them. This effort was led by Piero Genovesi (Chair of the ISSG) and his colleague Riccardo Scalera and we thank them for their efforts to highlight this issue. EAZA agreed to collaborate and the result

- collaborate as appropriate with the zoological gardens and aquariums in implementing and helping disseminate good practices and codes of conduct aimed at preventing release and spread of invasive alien species;
- consult, when possible, the zoological gardens and aquariums in the identification of priority invasive alien species and in the preparation and implementation of mandatory measures to tackle priority invasive alien species.

In addition, at the recent conference of the parties of the Convention on Biological Diversity in Hyderabad in October 2012, this new code was formally acknowledged.





# Conservation on your doorstep

**Vienna Zoo is proof that zoos can be an integrated part of local conservation networks as well as international ones**

Regina Pfistermüller, Curator for Research and Conservation Projects, Vienna Zoo

Vienna Zoo is the largest zoo in Austria in terms of species kept and annual visitor attendance. Its role in local animal conservation, however, has not always been seen to be particularly valuable, or even existent, in both public opinion and within Austria's conservation community. Therefore, in recent years, in addition to participating in international conservation projects, the zoo has also focused on getting involved in more local projects and networking with environmental departments and ministries, local NGOs, national parks and project initiatives.

The traditional conservation values of a zoo are to provide conservation projects with offspring from species for reintroduction (as for example with the reintroduction of the Ural owl to connect populations in Germany and Slovenia), and financial support. Not only is this role important, it also generates a largely positive image of a zoo in the public eye for its role as facilitator between conservation projects and visitors and providing expert

advice to the public, governmental authorities and projects.

To strengthen our communication with the local conservation sector, Conservation Days were established in 2007. A public multiple-day fair during which we invited any organisation or project involved in conservation and environmental issues to come to the zoo and present their work to visitors, Conservation Days enabled projects to be exposed to a larger audience, and allowed us to get to know more about them as potential partners.. Whereas in the beginning we actively had to go out to contact national parks, the appropriate cities and federal departments to take part, now, NGOs and small projects get in touch with us to confirm next year's participation. Through word-of-mouth, each year new groups want to take part in Conservation Days. In 2009, the concept was also adopted by all members of the Austrian Zoo Organisation (OZO). Meanwhile, we are linked with many of the projects throughout the year and they help us shape opinion about a zoo's

conservation role, reaching people, sometimes including those with a negative attitude towards zoos, that we could not have reached before.

As an example of Vienna Zoo's involvement in a local conservation project, the cooperation with the Danube Wetlands National Park is worth highlighting. Helping our visitors become engaged with the national park's European pond terrapin programme resulted in a partnership that has now existed for five years, raising not only the programme's profile but also increasing the conservation outcome dramatically.

In Austria, the European pond terrapin (*Emys orbicularis*) is the only native turtle and is classified as Critically Endangered within the country. The only viable population is found in the floodplain forests extending 50km along the River Danube – the Danube Wetlands National Park. The population is threatened by habitat loss, and the release of non-native European pond terrapins from southern countries. The few remaining optimal nesting sites







**CLOCKWISE FROM ABOVE:** HATCHLING LEAVING ITS NEST, WHICH IS PROTECTED AGAINST PREDATORS BY A STURDY METAL GRID; EUROPEAN POND TERRAPIN HATCHLING INCUBATED AT VIENNA ZOO RETURNS TO THE NATIONAL PARK BOTH © NP DONAU-AUEN; YOUNG URAL OWLS READY TO BE REINTRODUCED TO THE WILD © DANIEL ZUPANC; SLEEPING QUARTERS FOR BECHSTEIN'S BAT BEING INSTALLED AT VIENNA ZOO







CLUTCH OF EUROPEAN  
POND TERRAPINS  
INCUBATED AT VIENNA  
ZOO RETURNS TO THE  
WILD ACCOMPANIED  
BY PROJECT LEADER  
MARIA SCHINDLER  
AND A LOCAL  
SCHOOL CLASS  
© NP DONAU-AUEN

are consequentially used by many of the gravid females and nest density is high. Not surprisingly, these are well known to local predators such as foxes and martens, who can easily smell the easy-to-get-to delicacies and dig them out immediately after egg-laying.

In 1997, the national park started its European pond turtle conservation programme to reduce disturbances, protect nesting sites and develop a broad monitoring concept, including ecological and genetic studies to optimise protection management. The conservation measures concentrated on the *in situ* protection of clutches by metal grids as a minimal invasive method to prevent predation. To protect the eggs nests are covered by sturdy metal grids directly after egg-laying is finished. The mesh openings are chosen to be large enough to enable offspring to hatch without any problems, and are anchored deep enough in the ground to prove successful against predators. Going out at night during egg-laying season, following gravid turtles to their chosen nesting site, waiting for them to lay their eggs, mounting the grid, marking the female and taking genetic samples is time- and cost-intensive, and initially was only being carried out by biologist and turtle expert Maria Schindler. Even though she was very dedicated to the programme, in 2006 she was only able to protect nine nests and found a daunting number of 78 nests destroyed. Even though the 'Friends of the Zoo Vienna' had provided one-time funding to the project, this was not a permanent solution.

On the initiative of the Tiergarten Schönbrunn and through cooperation with the Danube Wetlands National

Park, a successful nest adoption programme began in 2007. For 100 euro the sponsor receives a certificate with a nest number. The location of the nest remains secret, but a guided tour into the national park with Maria is arranged each season to give sponsors direct and detailed information on the Danube wetlands, the European pond terrapin, and the status of the project. At the end of the year, each sponsor receives a report revealing the fate of his or her nest. In addition the zoo offers veterinary help, and allocates facilities and personnel to incubate and raise offspring from the wild if necessary.

#### GREAT RESULTS

These common efforts show great success: 207 symbolic adoptions of turtle clutches and other donations raised helped to finance more nest-minders and resulted in the *in situ* protection of 377 clutches so far and a total number of 1,799 hatched turtles. During this period, five clutches, which had no chance of successful natural development (because they had been laid in parking lots or on forest roads) were translocated to the zoo and bred artificially. After winter the hatchlings were released again in the national park.

Due to the large media and public interest, several companies are interested in sponsoring the project and, even more importantly, Austrians are more knowledgeable of the fact that there are actually native turtles in Austria, as well as of the danger of releasing unwanted pet turtles (see p26), and the efforts of the national park and the zoo to protect this species. Since the

symbolic adoption programme of turtle nests has been such a great success, a similar amphibian project then followed, which resulted in funding of parts of a permanent amphibian tunnel system, enabling amphibians and small mammals to safely cross one of Vienna's most travelled commuter road to reach their spawning waters.

Due to the zoo's extraordinary location at the tip of the Viennese woods, a national landscape conservation area also enables us to carry out local conservation activities on the zoo grounds themselves. In Vienna, 21 different native bat species can be found, one of which is the rare Bechstein's bat (*Myotis bechsteinii*). Bechstein's bat is threatened by habitat loss since it needs well structured deciduous and mixed forests and parks. Together with an Austrian association for bat protection and research (KFFÖ – Koordinationsstelle für Fledermausschutz und -forschung), Vienna Zoo has established a network of nestboxes for the Bechstein's bat throughout its forest grounds which are maintained in cooperation.

Whereas for a long time Vienna Zoo's contribution to conservation projects was in many cases merely viewed by the local conservation community as providing offspring for reintroduction projects and funding for renowned and large initiatives, we have demonstrated that we are able to provide multifaceted and diverse contributions – also with little funding – to local projects through continuous communication and creative thinking. It makes us an integrated part of the local conservation network.





# EAZA ANNUAL CONFERENCE

September 25 to 28, with Icebreaker on Tuesday 24

EAZA's Annual Conference in 2013 will be hosted by Edinburgh Zoo, Scotland. The conference itself will be based in the heart of this historical city, one of the United Kingdom's most popular tourist destinations.

Registrations are now open and accommodation can be booked in a range of hotels located around the city centre. The conference will take place at Edinburgh International Conference Centre (EICC), a dedicated conference and exhibition centre.

Full Conference Fee	€658.00 (£530.00)
Early bird rate* (register before midnight May 17th)	€535.00 (£430.00)
Single Day Fee	€282.00 (£225.00)
Early bird rate* (register before midnight May 17th)	€232.00 (£185.00)
Accompanying Partner	€185.00 (£150.00)



For more information, visit [www.eaza.net](http://www.eaza.net)





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High Fibre Red Panda  
Kinkajou Cake  
LowFe  
Zooplement GP and ZM

Leading the way