



TAG REPORTS 2015

EUROPEAN ASSOCIATION OF ZOOS AND AQUARIA



INTRODUCTION

EAZA's Taxon Advisory Groups (TAG) range from Amphibians to Cattle and Camelids, from Hornbills to Old World Monkeys and many more. TAGs define the *ex situ* management level a species requires, which might be low, medium or high. Within the European Association of Zoos and Aquaria (EAZA) these levels are defined as Monitor Programmes, European Studbooks (ESB) or European Endangered Species Programmes (EEP). At the end of 2015 EAZA had 39 TAGs, 199 EEPs and 201 ESBs. A milestone: 400 official EAZA breeding programmes (EEP and ESB), 30 years after the establishment of the first EEPs in 1985! Each TAG develops and oversees the implementation of a Regional Collection Plan (RCP), in which the management level of species is outlined. The RCP is a living document, continually under revision due to shifts in both *ex situ* and *in situ* population management. RCPs should be used as the base for Institutional Collection Plans, so that institutions obtain animals that have the highest priority of being held within the EAZA community.

The TAG also oversees and helps to develop EAZA Best Practice Guidelines that reflect the best practice management of the respective taxa. The TAG itself is led by a TAG Chair who is assisted by one or more TAG Vice-chairs, depending on the number of species covered by the group. Within the remit of the TAG also lie the EEPs, ESBs and Monitor Programmes and the TAG encourages involvement of representatives from across the EAZA community. Most TAGs are assisted by internal and external advisors regarding specific topics, such as veterinary or research matters for instance. Additionally EAZA's EEP Committee guides the TAGs in decision making processes, such as approving the nomination of new breeding programme managers and non-EAZA institutions to participate in EEPs. Together the EAZA's TAGs cover all groups of animals held by EAZA collections. A TAG meeting is held at least once per year, which brings breeding programme managers, other experts and interested parties together. To ensure the quality of intensively managed populations, the TAGs evaluate their EEPs every five years.

As always, TAGs have worked on a wide range of activities in 2015. The first few TAGs have now gone through the newly released TAG evaluation process which helps demonstrate what goes well and where programmes and all colleagues involved in the TAG work can improve even more. The TAG Chairs and members have contributed to the development of the new EAZA breeding programme structure sharing comments on the proposals and actively contributing to a successful series of discussions organised during the EAZA Annual Conference in Wrocław, Poland. A detailed overview of the activities of each of the TAGs can be found in this TAG Annual Report.

If you wish to receive more information on any of the topics raised, please contact the EAZA Executive Office via info@eaza.net. EAZA extends its thanks all the Chairs, members and breeding programme coordinators for their hard work in 2015.

TERRESTRIAL INVERTEBRATE

TAG Chair: Mark Bushell (Bristol Zoo Gardens, United Kingdom)

TAG Vice-chair: Tamás Papp (Budapest Zoo, Hungary)

The TAG structure was slightly changed in 2015, with Mark Bushell being appointed as TAG Chair with Tamás Papp in support. A second Vice-chair is being recruited in 2016.

Only one meeting was held in 2015. The first EAZA Terrestrial Invertebrate TAG (TITAG) symposium was held at Artis Royal Zoo in August this year, with over thirty attendees including representatives from New Zealand, the United States of America and Costa Rica. Subjects covered included butterfly conservation in the Netherlands and America, the husbandry of dragon-headed katydids and the latest efforts of weta conservation in New Zealand. The TITAG plans to have a meeting at the 2016 EAZA Annual Conference being held in Belfast.

Work continues on the Ethical Euthanasia guidelines for Invertebrates with our veterinary advisor Mark Eichelmann working very hard on making them as comprehensive as possible. They are currently under review and we hope to have them published officially in 2016.

A new version of the Regional Collection Plan continues to be updated as a living document and a new version was published in early 2015. With so many species of invertebrate being kept in EAZA institutions it will remain a living changeable document with regular small updates. Work has started on identifying key Best Practice Guidelines to produce in 2016 with discussions on collaboration between colleagues in relevant TAGs and Working Groups in AZA and BIAZA respectively.

November 2015 saw the start of a European population of the Lord Howe Island stick insect (*Dryococelus australis*) at Bristol Zoo Gardens as part of an attempt to start a global breeding programme for the species, with colonies also being established at San Diego Zoo and Toronto Zoo. The formation of an EEP is being discussed to link populations with the proposed Species Survival Plan within the AZA TITAG, hopefully leading to a Global Species Management Plan in the future.

Ex situ breeding of the Crau Steppe grasshopper (*Prionotropis rhodanica*) was achieved at Thoiry Zoo, with over 200 egg-pods being produced of this Critically



LORD HOWE ISLAND STICK INSECT AT BRISTOL ZOO GARDENS © MARK BUSHELL

Endangered species of grasshopper endemic to the south of France. Some eggs have already been returned to the wild and research is being performed on *ex situ* incubation methods, with plans to include other European collections in the captive breeding programme in the next couple of years.

Discussions continue on the conservation strategy of the Desertas wolf spider (*Hogna ingens*) with a meeting of interested parties scheduled in Funchal for May 2016. It is hoped that a *ex situ* population can be established before the close of 2016, with several EAZA collections interested in participating in the proposed conservation programme.

A new ESB was formed for Gooty ornamental spiders (*Poecilotheria metallica*) which is held at Bristol Zoo Gardens while the evaluation process for the Partulid snail EEP was completed this year. We are currently looking to recruit a new coordinator for the Fregate beetle EEP as Amanda Ferguson (ZSL London Zoo) is stepping down from the role after several years of excellent work with the programme.

2015 saw the release of populations of *Partula affinis*, *P. hyalina* and *P. nodosa* back to Tahiti as part of the action plan of this flagship invertebrate conservation programme. Snails were taken from collections within the EEP in Europe and also from the SSP in the United States of America and assembled at ZSL London Zoo for quarantine and screening before their long journey to Tahiti where they were received by colleagues from ZSL London Zoo and Auckland Zoo, plus field biologist Trevor Coote and representatives from the French Polynesian government. This is the first step before future repatriations to Raiatea, Moorea and Huahine in the next few years as the action plan for Partulid snails starts to reach its end point of 2018.

FISH AND AQUATIC INVERTEBRATE

TAG Chair: Brian Zimmerman (Zoological Society of London, United Kingdom)

TAG Co-chairs: Max Janse (Burgers' Zoo, The Netherlands, Elasmobranchs); Anton Weissenbacher (Zoo Vienna, Austria, Freshwater teleosts); Daniel Abed-Navandi (Haus des Meeres, Austria, Marine teleosts)

Two Fish and Aquatic Invertebrate TAG (FAITAG) meetings were conducted in 2015, the first at the EAZA Annual Meeting in Wrocław Zoo, Wrocław, Poland and the second at the EUAC meeting in Loro Parque, Tenerife, Spain. The meeting in Wrocław was attended by mostly zoo colleagues since aquarium curators tend to choose EUAC as their main annual meeting. Therefore discussions in Wrocław included exploring ways of better integration between the two meetings and promoting greater participation, particularly in areas where overlapping opportunities exist. An extremely relevant presentation was given by Kristine Schad of EAZA on population management for group-managed species, and Toni Weissenbacher presented the latest developments on the Freshwater fish RCP. Brian Zimmerman gave an Elasmobranch TAG update on behalf of Max Janse.

At the EUAC meeting in Tenerife the FAITAG session was attended by more of the TAG participants and brief updates were given from each of the attending ESB keepers and species monitors. These updates showed the rapid expansion in the number of programmes under FAITAG and highlighted that even lower level management in the form of Monitoring programmes has value. In many ways Monitoring programmes will allow greater participation by members and provides training in species management across multiple institutions. The TAG chairs will agreed that we will soon need to evaluate how many individual updates should be given at the meeting, in order to allow good reporting but not to labour the audience with too many reports.

Our next midyear meeting is being held at Oceanário de Lisboa, Portugal and scheduled for late May/early June.

RCP Developments

Five new monitoring programs have been started within the elasmobranchs: *Scylliorhinus stellaris*, *Rhinoptera bonasus*, *Raja microocellata*, *Raja brachyuran* and *Dasyatis pastinaca*. All ESB coordinators in the elasmobranchs stayed the same.



ARAPAIMA

One application for a new ESB on *Rhinoptera bonasus* has not been approved by EAZA. It was decided to change the management of this species towards a monitoring level.

Until the next meeting in Lisbon, the RCP species should be identified from all selected freshwater fish families. Subsequently, activities and procedures should be assigned to all the selected species. A preferable situation and/or designated goal is to establish and start off a conservation project with *ex* and *in situ* activities for at least one species.

A MON-P for *Arapaima* sp. is planned. Although the species cannot be bred under aquarium conditions, it should, due to its charismatic character, become part of a monitoring project. In molecular-biological investigations it became apparent that the species known as *Arapaima gigas* comprises a species complex of at least four valid species. According to this information it is unclear what and how many species live in our facilities. The collection of husbandry parameters and potential information from transports should contribute to standardized positive methods of handling and keeping the species.

Both European seahorse ESBs were given approval by the EEP Committee to be downgraded to Monitoring programmes. This was felt to be the right step, given the population management difficulties these species provided and the challenges faced by the two coordinators. The programme for Short-snouted seahorses is now being managed by Jean-Denis Hibbitt of Merlin Entertainments, who has taken over from Olivia Walter.

Sustainable Acquisition Guidelines

Two meetings were held in 2015 related to improving the sustainability of public aquarium collections. The first meeting was held in June, hosted by Guido Westhoff at Hamburg Zoo. In Tenerife, a second workshop was held. The small working group set its first priority as drafting

guidelines for public aquariums when selecting suppliers of animals. This approach was deemed to be the most inclusive and cooperative way of engaging with suppliers and the best way of informing them of what our requirements and responsibilities were as managers of live animal collections in the public eye. The Guidelines have now been completed in their final draft form and the group is seeking comment from key suppliers. The draft guidelines have been reviewed by key suppliers and their comments are being used as the basis for the group's next steps.

Management issues

A steering committee of six people (three representatives of the ESBs and three of the MON-P coordinators) has been set up on the Elasmobranchs part of the FAITAG to help the vice-chair. In 2015 many monitoring programs within the elasmobranchi have been set up and published their first reports.

Within the Spotted eagle ray (*Aetobatus narinari*) ESB a genetic study has been performed of all animals within the studbook. A scientific study split the circumtropical *Aetobatus narinari* into three different regional species. The ESB study showed all animals within the European population are *Aetobatus ocellatus*. The name of the ESB has changed accordingly.

New TAG co-chair

Daniel Abed-Navandi of Haus des Meeres, Vienna, was approved by the EEP Committee as the new FAITAG Co-chair responsible for marine teleosts. Daniel is busy preparing a questionnaire for European aquariums to gain a greater understanding of which species are being kept, which are subjects of breeding initiatives and also who is interested in greater collaboration.

FAITAG genetics fund

At the end of 2015 a special FAITAG genetics fund was set up by a kind gift from Oceanário de Lisboa. This fund will help to realise genetic research on different programs within the FAITAG. Paternity questions and hopefully also taxonomic issues can be answered by this research. This will increase the knowledge of our captive population.

Conservation activities

The cooperation with official places/partners in Bermuda concerning the two known freshwater fish species of the island, *Fundulus bermudae* and *Fundulus relictus* continued

for the third year. Individuals of both species were given to the Vienna Zoo as back-up populations. Once per year the current status of the *ex situ* population is reported. The Vienna Zoo has enough individuals available to include other zoos in this project.

REPTILE

TAG chair: Ivan Reháč, (Prague Zoo, Czech Republic)

TAG Vice-chairs: Fabian Schmidt, Zoo Leipzig, Germany; Henk Zwartepoorte, Wilhelma Zoo, Germany; Henk Zwartepoorte, Wilhelma Zoo, Germany; Thomas Kölpin, (Wilhelma Zoo, Germany) Gerardo Garcia, (Chester Zoo, United Kingdom) Thomas Wilms, (Zoo Frankfurt, Germany)

In 2015, the Reptile TAG (RTAG) maintained eight EEPs and 21 ESBs. The RTAG coordinates the optimal management of EAZA reptile collections to ensure the long-term existence of populations of managed species of chelonians, crocodiles, lizards and snakes. This is all done while respecting conservation requests, research issues, space availability, ethics, safety and other associated aspects. Simultaneously, the RTAG is a platform where EAZA reptile specialists, as well as eventually other professional colleagues, can meet, share and disseminate information and work to improve expertise in reptile husbandry, develop relevant guidelines, protocols and recommendations.

In 2015 we lost a special advisor of the Reptile TAG and an influential European member of the IUCN SSC Crocodile Specialist Group (CSG). On 11 June 2015 Ralf Sommerlad passed away in Frankfurt, Germany. For many decades he was a very active member in the Crocodile Specialist Group, especially in the European region and in the Tomistoma Task Force, the crocodilian species that was closest to his heart. For many years he was the main contact between European zoos and the Crocodile Specialist Group in his function as special advisor of the Reptile TAG, and it was one of his main goals to sensitize European zoos for the conservation of crocodiles. At his funeral the Reptile TAG was well represented with the three Vice-chairs Thomas Kölpin, Fabian Schmidt and Thomas Wilms. A memorial was held at the EAZA Annual Conference in Wrocław. He will be dearly missed.

In 2015, the Reptile TAG underwent some changes in its membership, including the introduction of two new TAG


 ALDABRA GIANT TORTOISE (*ALDABRACHELYS GIGANTEA*) © PETER HAMERNIK

members (Iri Gill, Petr Velenský) and termination of one TAG member (Aleksander Niweliński, who resigned as studbook keeper for *Cuora amboinensis* ESB and *Siebenrockiella crassicollis* ESB. Both programmes are vacant now). The RTAG has focused on goals specified in the Reptile TAG Five Years Action Plan (formulated in 2012), like progress in RCPs, solutions for stagnant programmes, and other significant issues. The RTAG took part also in evaluations of some reptile EEPs (e.g. Komodo dragon EEP), which significantly helped to find some weaknesses and problems. RTAG representatives are active in various EAZA activities related to research (Ivan Reháček – member of EAZA Research Committee) and population management (Fabian Schmidt – member of EAZA Population Management Advisory Group).

International cooperation

The RTAG cooperated closely with the EAZA Amphibian TAG as well as with partners in other regional associations (e.g. AZA, ZAA). Fabian Schmidt participated in the AZA Crocodylian TAG Meeting and AZA Lizard TAG meeting at Atlanta Zoo in April 2015 to consolidate the good contacts between zoos of the North American and European regions on questions of reptile husbandry. Lectures on the husbandry of *Tomistoma*, on the studbook of African dwarf crocodiles, on natural rearing of crocodiles and Komodo dragons and other lizards in Gondwanaland of Leipzig zoo were given.

To facilitate the creation of conservation *ex situ* and *in situ* links, the RTAG continued to develop a close cooperation with the IUCN Specialist Groups, Task Forces and other IUCN umbrella organisations – in particular Crocodile SG, Iguana SG, Fresh-water Turtle SG, CSG *Tomistoma* TF, Turtle Conservation Alliance – plus other international reptile conservation initiatives (e.g. Gharial Conservation Alliance, Asian Turtle Conservation Network, Blue Iguana

Recovery Programme). It also included active participation at SG meetings (in the CSG a special working group is actively working on CSG zoos cooperation) and vice versa participation of SG members at RTAG meetings. The European region was represented by Fabian Schmidt, Zoo Leipzig and Samuel Martin, La Ferme aux Crocodiles Pierrelatte at the 3rd West and Central African Regional Meeting of the IUCN CSG in Abidjan. The European studbook for African dwarf crocodiles (*Osteolaemus tetraspis*) was presented and it was offered that genetically pure and socially compatible animals can be produced upon request for exportation to range states for reintroduction, reinforcement or tourism purposes. La Ferme aux Crocodiles in Pierrelatte is active in this region for many years and renewed its offer to help and support in establishing *in situ* conservation projects for *Osteolaemus* in the region.

TAG meetings

Two RTAG meetings were held in 2015. The first meeting in May 2015 was hosted by Bioparc Fuengirola, Spain. Among a number of presentations (including guest speaker Salvador Carranza, Institute of Evolutionary Biology, Barcelona) and reports, a session on UV light for reptiles and workshops on lizard RCP and snake RCP were also held. Special attention was focused on venomous snake management guidelines and on the biology of desert reptiles and its reflection in *ex situ* management. In Fuengirola there was also a strong focus on crocodiles: Iri Gill (ZSL) presented pictures from his field trip to investigate conservation and research needs for the Indian gharial (*Gavialis gangeticus*) in Nepal. Markus Klamt from the



RESEARCH UV REFLECTION IGUANAS © IVAN REHÁK

universities of Rostock and Vienna presented the results of his master thesis on the behaviour of Sunda gharials (*Tomistoma schlegelii*) at Leipzig Zoo. Thomas Ziegler from Cologne Zoo presented an update on the studbook of the Philippine Crocodiles (*Crocodylus mindorensis*).

The second meeting was held during the EAZA Annual Meeting in Wrocław, Poland, in September 2015. During the meeting a great variety of presentations, reports, programme updates, new information and discussions was given. Moreover, the Ralf Sommerlad Memorial was held during the meeting to remember our colleague who passed away in 2015. The meeting programme included a proposal to create an ESB for the European pond turtle (*Emys orbicularis*) to cover European species and to facilitate co-operation with partners in efforts to conserve this unique species. During a special crocodile session all crocodile studbook updates were given, in particular of the African dwarf crocodile ESB (Fabian Schmidt, Zoo Leipzig) and of the Tomistoma ESB (Jesús Recuero, Bioparc Fuengirola), which included an update on the Sabangau conservation project. Gerardo Garcia (Chester Zoo) reported about the transfer of two adult Sunda gharials (*Tomistoma schlegelii*) from Pierrelatte to Chester and their new enclosure in Chester Zoo. Ana Wahlström (Skansen-Akvariet) informed about returning young Cuban crocodiles (*Crocodylus rhombifer*) bred in their institution to the Zapata Swamps in Cuba.

Crocodylians

A crocodylians subgroup (within the EAZA Reptile TAG) led by Fabian Schmidt (Zoo Leipzig), and with Samuel Martin (La Ferme aux Crocodiles, Pierrelatte) as the veterinary advisor for this subgroup, covers in total five programmes, one EEP and four ESB. The news in these programmes can be summarised as follows:

- The evaluation of the Chinese alligator EEP showed that the results were insufficient. Hence during the reporting period there was a change in EEP coordinator. Randers Regnskov in Denmark refrained from keeping the studbook and Norbert Fritsch at Neunkirchen Zoo took over and started to compile the first dataset for this studbook since years.
- During the Working Meeting of the IUCN CSG in Lake Charles, the contacts between the ESB for Cuban Crocodiles and the Texas Tech University could be re-established, so the genetic screening for the European population for crocodiles could be restarted.
- The studbook for the Philippine crocodiles was very active supporting ongoing research mainly on genetic screening

of the European population but also regarding the social behaviour of the animals in Cologne Zoo. In addition training of the animals progressed and results on this were published as well. The collection in Europe increased mainly through breeding success at several different locations. The increase is so strong that breeding has to be reduced due to a relatively low demand for this species.

- Consequences of genetic research on managing breeding programmes have been published in the International Zoo Yearbook with the case study of the African dwarf crocodiles. In the meantime more than 95% of the registered European population is screened and further hybridisation is avoided. By active studbook management the percentage of pure *Tetrapsis* has been increased from 47 to 66% and the percentage of hybrids has been reduced from 34 to 19.6%. In addition, together with La Ferme aux Crocodiles, a location in Bénin was visited and first discussions with NGO's and the responsible ministerium regarding a restoration project were held.
- In the Tomistoma ESB there was a change of studbook keeper as well. After many years of excellent work Gonzalo Fernández Hoyo left the services of Bioparc Fuengirola and its owner Rainforests Ltd. We want to thank Gonzalo for the excellent work he did for many years. Jesús Recuero took over and as he assisted Gonzalo in the past years already this was a very smooth transition. The population grew, but unfortunately not through new breeding results, but mainly due to animals that have been imported into Europe recently or have not been registered before. Breeding this species remains the biggest challenge of this studbook. The ESB established and supported financially a population and habitat survey in Sabangau Pet Swamp Forest in central Kalimantan (Indonesia), which was supported by Bioparc Fuengirola, Zoo Leipzig, Chester Zoo, Zoo Dvůr Králové, SOS Crocodiles, and Taipei Zoo.
- All programmes published studbooks in the reporting period with the exception of the two in which the coordinator changed.

In addition to these programmes there is screening of the genetic status of further African crocodile species, for which there is currently no EAZA programme. Thomas Ziegler came across a West African Crocodile (*Crocodylus suchus*), which was supposed to be a Philippine crocodile, but his studies revealed the real taxonomic status of this old animal. Following this founding Thomas Ziegler screened also several Nile crocodiles and found a small population of West African crocodiles present in Europe. Following the study of Shirley



KOMODO DRAGON EGG © PETR VELENSKY

et al. (2014) that describes the differentiation between West and Central African slender-snouted crocodiles (*Crocodylus cataphractus*) it was reasonable to check the European population for these taxonomic differences. Unfortunately there is no breeding programme established so far, but Vivarium Lausanne, Switzerland volunteered to monitor this species in Europe and to initiate a research project for the coming years to identify the taxa of the animals living in European collections.

Another species rarely kept in European zoos and actually deserving more attention is the Siamese crocodile (*Crocodylus siamensis*), but we lack staff volunteering to initiate the establishment of a programme in European zoos. Thomas Ziegler et al. (2015) rediscovered this species in Khammouane, Laos and now efforts are made together with Laotian and Vietnamese partners to create a reserve for this

population. Additionally animals of this population shall be screened in cooperation with University Braunschweig and University Hanoi and it is planned to include also animals kept in captivity in Vietnam in the future.

Another issue getting increasing attention within the European zoo community is the way of rearing crocodiles: An increasing number of zoos no longer hatch crocodile eggs artificially and hand-rear the juveniles, but let the eggs develop in their nests in the enclosures. This encourages the natural defensive nesting behaviour of the females, sometimes even both parents. In several cases also the juveniles were not caught after hatching for hand-rearing, but left with their mother or parents, so the animals had a chance to naturally guard their offspring and zoo visitors can see family groups and by that learn about the parental care of juveniles in this taxon. Such displays can be seen in Europe now in African dwarf crocodiles (*Osteolaemus tetraspis*) in Leipzig, Gossau (CH) and Bristol (UK) as well as in Philippine crocodiles (*Crocodylus mindorensis*) in Cologne. This natural method of rearing crocodiles is still not common in European zoos but the success demonstrated by the institutions mentioned above, was published in several articles and in lectures mostly in conferences and journals, that are not specifically herpetologically oriented, but do contain more general zoo-relevant topics in order to spread the word about this method of rearing crocodiles in the European zoo community.

Komodo dragons

Other important meetings closely related to the RTAG work were held in Prague in November 2015 - the Komodo dragon workshop, followed by the Long-term Management Plan for the Komodo dragon EEP. The Komodo dragon workshop reflected enormous progress in husbandry of this impressive species and great knowledge accumulated in European zoos during recent years. It was attended by more than forty participants representing 12 countries including overseas. The Long-term Management Plan for the Komodo dragon EEP, prepared by the *Varanus komodoensis* EEP in close cooperation with EAZA EO, achieved expected goals concerning the species management. Moreover, Claudio Ciofi, University of Florence, Italy – a top expert on Komodo dragon conservation biology and population management (and the close cooperator of the Komodo dragon EEP) – was invited to present new results of his conservation work.

Further activities

Significant development continued in implementing the

EAZA Research Committee recommendations and focusing on important research issues for proper species management as well as for *ex situ* (and in some cases also for *in situ*) conservation efforts. Thanks to professional coordination of programme coordinators and cooperation from involved zoos as well as academic partners, important research projects have been conducted. For instance, the DNA analysis for the Komodo dragon done in Prague to determine the origin of EAZA EEP specimens and to determine the sex in Komodo dragons.

Within EAZA a new database was developed containing information on conservation projects supported by its member zoos. The Reptile TAG completed the templates regarding the crocodiles. In this database one can find information on the genetic screening of the European studbook population of African dwarf crocodiles (genus *Osteolaemus*) by Leipzig Zoo, the support of European zoos for *in situ* conservation of the Philippine Crocodile by The Mabuwaya Foundation coordinated by Cologne Zoo, the *Tomistoma schlegelii* population and habitat survey in Sabangau Pet Swamp Forest, Central Kalimantan, Indonesia by Bioparc Fuengirola and the genetic screening of *Crocodylus rhombifer* population within EAZA by Paignton Zoo. The direct support to wild Komodo dragon conservation in Flores, Indonesia, coordinated by the Komodo dragon EEP, is another important EAZA reptile conservation projects.

The International Zoo Yearbook is one of the most important publications in the international zoo community. The general topic in issue 49, published in 2015, was 'Reptile conservation' edited by the guest editors Jeff Ettling from St. Louis Zoo (USA) and Fabian Schmidt, Leipzig Zoo. The input given from the EAZA region was quite significant. In 7 out of 15 articles colleagues who are also active for the EAZA Reptile TAG were included as first authors or co-authors. They are listed below:

J. Ettling & F. Schmidt: Introduction to Reptile Conservation.

T. Ziegler: *In situ* and *ex situ* reptile projects of the Cologne Zoo: Implications for research and conservation of South East Asia's herpetodiversity.

A. Weissenbacher, D. Preininger, R. Ghosh, A.G.J. Morshed & P. Praschag: Conservation breeding of the Northern river terrapin *Batagur baska* at the Vienna Zoo, Austria, and in Bangladesh.

H. Zwartepoorte: Captive breeding of the Critically Endangered Egyptian tortoise *Testudo kleinmanni* Lortet, 1883, for an *in situ* recovery project in Egypt.

I. Reháč: Protecting and managing a local population of the European Green lizard *Iacerta viridis* at the Prague Zoo, Czech Republic.

A. Ariefandy, D. Purwandana, C. Natali, M.J. Imansyah, M. Surahman, T.S. Jessop & C. Ciofi: Conservation of Komodo dragons *Varanus komodoensis* in the

Wae Wuul nature reserve, Flores, Indonesia; a multidisciplinary approach.

T. Pechy, B. Halpern, E. Sos & C. Walzer: Conservation of the Hungarian meadow viper *Vipera ursinii rakosiensis*.

F. Schmidt, F.A. Franke, M.H. Shirley, K.A. Vliet & V.L. Villanova: The importance of genetic research in zoo breeding programmes for threatened species: the African dwarf crocodiles (genus *Osteolaemus*) as a case study.

R. Stuebing, R. Sommerlad & A. Staniewicz: Conservation of the Sunda gharial *Tomistoma schlegelii* in Lake Mesangat, Indonesia.

RATITE

TAG Chair: Joost Lammers (Avifauna, The Netherlands)

TAG Vice-chair: Jo Gregson (Paignton Zoo, United Kingdom)

The EAZA Ratite TAG encompasses all species of palaeognath birds (this includes ostriches, rheas, cassowaries, emus, kiwis and tinamous) and was established in 2008. The mission of this TAG is to facilitate management of ratites and tinamous in EAZA collections and participate in and support relevant conservation efforts.

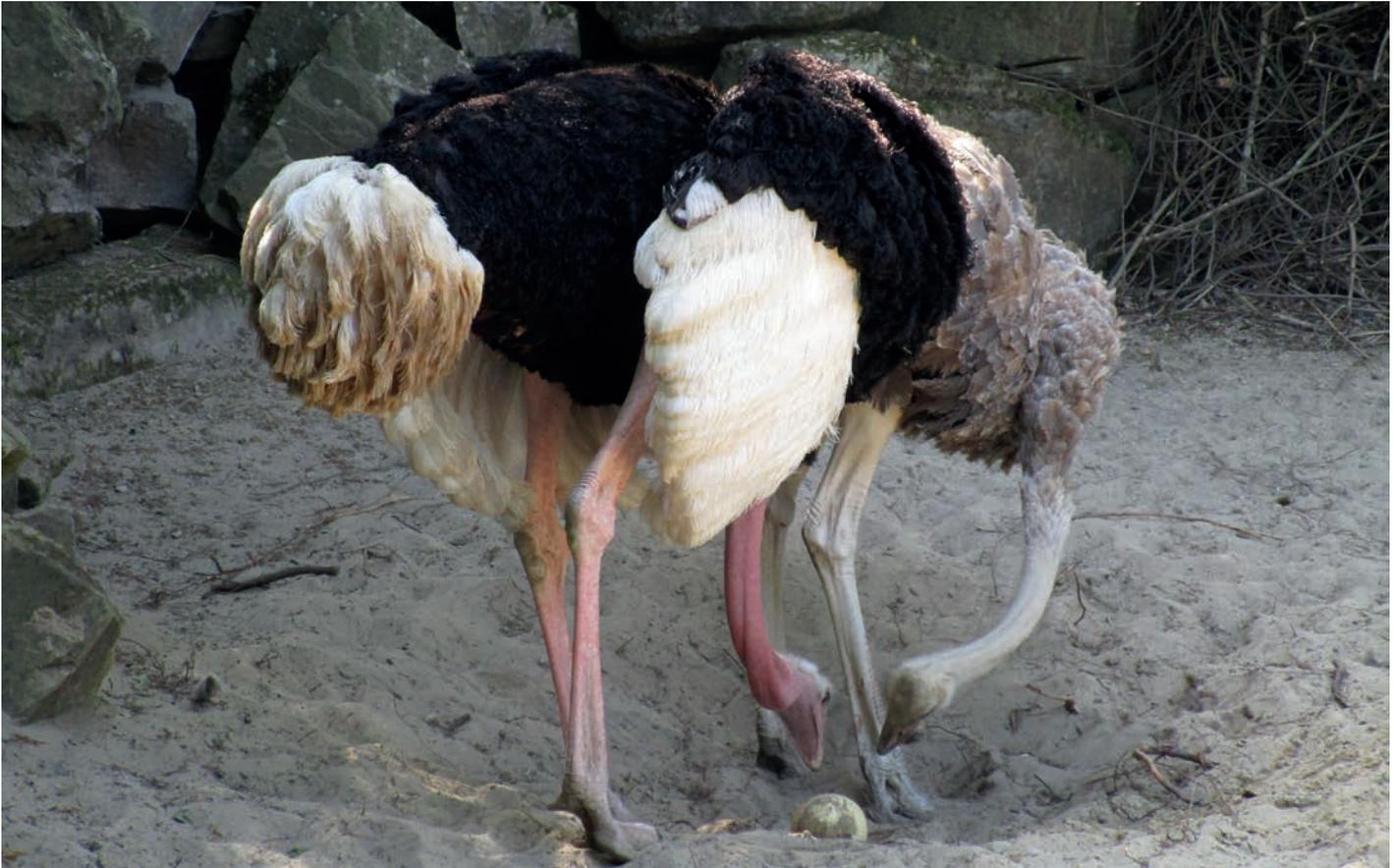
During 2015 the EAZA Ratite TAG met once in September, at the EAZA annual meeting in Wrocław. Since this was the first time since the official establishment of this TAG that a meeting was held at the Annual Meeting (we normally meet at the mid-year meetings) it was decided to focus mainly on husbandry issues and give interesting presentations to advertise the TAG a bit more in EAZA.

Darren McGarry, Edinburgh Zoo, presented the two successful seasons they had with Darwin's rhea at Edinburgh Zoo. Both the hand and parent rearing of the rheas was given attention and the presentation gave a very good idea what it takes to get the species breeding in EAZA institutions.

Anton Vaidl, Prague Zoo, shared his knowledge and skills about artificial incubation with us during his presentation on artificial incubation of Southern Cassowary in Prague.

Tinamous were not forgotten in this meeting and Tjerk ter Meulen, GaiaZoo Kerkrade, presented their experiences (the good and the bad) on keeping and breeding Elegant crested tinamous in Kerkrade.

Maren Frerking, Hannover Zoo and EEP coordinator for the North African ostrich, gave an update on the *in situ* and *ex situ* situation of the species. Special attention was given to the current breeding results in this EEP. Due to these breeding results another two zoos can join the EEP (Alphen



NORTH AFRICAN OSTRICH (*STRUTHIO CAMELUS CAMELUS*), HANNOVER

and Leipzig) with birds and Paignton will also have a potential breeding pair in the near future.

In last year's report it was mentioned that in 2013 the ISB for the Southern Cassowary was approved by WAZA and in 2015 Nicole LaGreco (San Diego Zoo) produced the first international studbook for the species.

Unfortunately this species was not doing so well in 2015 in EAZA with no surviving chicks for the first time since the establishment of the ESB in 2002.

On 26 September World Cassowary Day was organised by Mission Beach in Australia that could be joined by zoos worldwide. As ESB keeper for the species Vogelpark Avifauna (Alphen) also celebrated World Cassowary Day and this is something the ESB keeper would like to encourage more EAZA zoos to participate in for next year. So this will be more actively promoted for next year in EAZA.

In 2015 the EAZA Ratite TAG was evaluated and the outcome is that the TAG is functioning well. The EEP Committee complimented the TAG on what has been achieved already since the establishment of the TAG in 2008, and encouraged the TAG to continue the good work.

Based on the feedback it is highlighted that it is important

for the TAG to start working on the following topics the coming period:

- Revise the current RCP (according to the RCP template)
- Publish/update guidelines for recommended species according to Best Practice Guideline template and procedure.

So these will be the topics the TAG will focus on for the next year(s).

According to the time schedule from the EEP Committee the North African ostrich EEP should also be evaluated for the first time next year so that will also be one of the goals for 2016.

PENGUIN

TAG Chair: Pierre de Wit (Wildlands Adventure Zoo Emmen, The Netherlands)

TAG Vice-chair: Jo Elliott (RZSS Edinburgh Zoo, United Kingdom)

TAG mission and Collection Planning philosophy

All penguins held globally under human care in zoological gardens can be regarded as iconic, flagship animals. Because of their appeal, the goal of the Penguin TAG is to provide leadership for the management of penguins in EAZA collections in order to maintain healthy, sustainable populations for the purposes of inspiring and promoting appreciation and conservation of penguins and their habitats.

Meetings

No meetings of the Penguin TAG were held in 2015. However both Northern rockhopper (*Eudyptes moseleyi*), Southern rockhopper (*Eudyptes chrysocome*) and African Penguin (*Spheniscus demersus*) EEPs held species committee meetings in Wrocław.

Conservation and Research

The TAG does not directly support conservation work, but highlights the work of its members. In particular two strong programmes are supported widely by penguin holders in Europe, SANCCOB and Sphenisco (African and Humboldt penguins respectively). More details of these programmes and how to support them can be found here: www.sanccob.co.za and www.sphenisco.org

Veterinary studies have been undertaken on the detection/diagnosis of Aspergillosis with thermal imaging, as well as a study on electrophoresis in Gentoo penguins, which should both be published by the end of 2016.

Update on Breeding Programmes

Following on from the RCP published in 2014, programmes have continued to be developed and upgraded. The newly established King penguin (*Aptenodytes patagonicus*) EEP has continued to strengthen, with the population showing sustained growth over several seasons now.

In 2015 the Rockhopper ESB studbook was split into two separate studbooks for Northern and Southern rockhoppers. Additionally they were approved as EEPs and a new coordinator appointed for both, Harald Schwammer of Vienna Zoo.

Additionally, the monitored species Macaroni (*Eudyptes chrysolophus*) and Magellanic penguins (*Spheniscus magellanicus*) both have new monitors and the next steps for these species will be to propose them as ESBs.

The Penguin TAG has been working on a draft document entitled, 'EAZA Penguin TAG Applications check-list for imports of penguins or their eggs from the wild', which it hopes to have approved and published during 2016.



AFRICAN PENGUIN (*SPHENISCUS DEMERSUS*) © ARTIS, RONALD VAN WEEREN

The African penguin EEP has just published its first Population Management Plan. After the joint TAG Chairs meeting in Alphen in 2014 talks continue with colleagues, particularly in the AZA region, on cooperation on some of our more challenging species, particularly the crested penguins (*Eudyptes* spp.). We are also continuing to liaise with our ZAA colleagues to facilitate the import of little penguins surplus to the ZAA breeding programme into Europe in future years to establish an EEP in addition to the managed programme currently established in AZA.

CICONIIFORMES AND PHOENICOPTERIFORMES

TAG Chair: Cathy King (Weltvogelpark Walrode, Germany)

TAG Vice-chair: Andrea Bračko (Zagreb Zoo, Croatia)

Ciconiiformes and Phoenicopteriformes Collection Plan

An ESB was initiated for the puna ibis (*Plegadis ridgwayi*) (studbook keeper Tjerk ter Meulen, GaiaZOO) and for the lesser adjutant stork (*Leptoptilos javanicus*) (studbook keeper Jo Gregson, Paignton). While the puna ibis is not considered threatened, the EAZA population is small, and careful management is required if we want to continue exhibiting this South American ibis in EAZA zoos. Discussions are already underway with other regions to informally collectively manage the lesser adjutant storks in our zoos and aquariums; this stork meets the criteria for Vulnerable in the IUCN Red

Data List. Currently 37 species are included in the EAZA Ciconiiformes and Phoenicopteriformes Collection Plan: two as EEPs, 10 as ESBs, 14 are monitored by a specified person and 11 are monitored by the TAG. The two EEPs are for the Oriental white stork (*Ciconia boyciana*) and the Northern bald ibis (*Geronticus eremita*), listed as Endangered and Critically Endangered respectively. The storks and large herons in the collection plan are mostly managed as ESBs and the ibises are mostly monitored by a specified person. All four of the flamingo species and the smaller herons included in the collection plan are monitored by the TAG.

Best practices and more

Although species monitored by the TAG are only loosely managed, there is still much that can be done. For example, a Fabulous Flamingo Survey was carried out in 2005 to assess future plans and whether EAZA zoos were meeting their institutional objectives regarding some aspects of flamingo management. Based on the results of this questionnaire the TAG developed 11 strategies for European zoos individually and collectively to improve flamingo management (King and Bračko, 2014). The Fabulous Flamingo Survey is carried out at five year intervals, having been repeated in 2010 and 2015. Tobias van Vliet, a student at the Van Hall Larenstein University of Applied Science in the Netherlands, compiled the data from the 2015 Fabulous Flamingo Questionnaire, and compared the results of all three. Interesting trends, also useful for guiding further directions, emerged from this exercise. The results will be presented at the 2016 EAZA mid-year bird TAG meeting and published soon.

Another species monitored by the TAG is the Cape ibis

(*Geronticus calvus*), categorised as Vulnerable in the IUCN Red Data List. The first International Cape Ibis Studbook was published by Harrison Edell (Dallas Zoo, USA) in December 2015. There were 58,67.09 (134) birds at 19 institutions in four regions included in the studbook. While the most specimens (56) were found in the EAZA region, Europe had the smallest effective population size and a female-skewed sex ratio. A goal for 2016 will be using the MateRx charts included with the studbook to suggest possible pairings of Cape ibis among EAZA holders to improve the genetic representation of founders, and to find a champion for this species.

Husbandry questionnaires were undertaken in 2015 for both puna ibis and Eurasian spoonbills (*Platalea leucorodia*) for establishing husbandry best practices, under the supervision of Tjerk ter Meulen, ESB keeper for puna ibis, and Warren Spencer, specified monitor for Eurasian spoonbills. An exhaustive overview of free-ranging and zoo sacred ibis (*Thresornis aethiopicus*) in Europe was undertaken, and the risks of escape of sacred ibis from European zoos and how European zoos might manage these risks were assessed. This study is available (in French) from Xavier Vallaint (Lyon), the sacred ibis specified monitor. There are many sacred ibis in European zoos: the study reported 1599 in 98 institutions. Regulation 1143/2014 on invasive alien species went into force on 1 January 2015, and there is now a list of 37 invasive species, including the sacred ibis, that face eradication or strict control measures in an attempt to protect native wildlife and reduce economic losses. This means that in principle zoos are required to stop holding sacred ibis, but how this legislation will be enacted is resolved by each country individually, and much is still not clear.



WHITE BELLIED HERON, *ARDEA INSIGNIS*, BHUTAN CALCUTTA INDIA © TUKAI BISWAS

TAG meetings and interregional collaboration

An article on a hypothetical point system for breeding flamingos (King, 2008), translated from English to Spanish by ALPZA volunteers, stimulated much discussion among ALPZA blog readers. It was consequently agreed with Martín Zordan, ALPZA Executive Office Director, to further strengthen information exchange and other ties between ALPZA and the TAG. Martín did his part by giving an interesting presentation about ALPZA *in situ* and *ex situ* flamingo activities during the TAG meeting held in Wrocław, Poland. Many other excellent presentations were also given, and can be viewed on the EAZA website. A TAG meeting at the 2015 Bird TAG mid-year meeting was devoted to discussion of aviary challenges, including topics such as species suitability for walk-through aviaries, types of aviaries, predator protection, and the aviary database.

Conservation

The TAG Chair spoke about white stork (*Ciconia ciconia*) conservation at the first international forum and release ceremony for oriental white storks (*Ciconia boyciana*) in Yesan, South Korea, where a translocation programme for this stork has been initiated. Close collaboration exists between the South Korean, Japanese and European regions regarding both *in situ* and *ex situ* conservation of this endangered species. The TAG Chair also attended the second workshop for conservation of the critically endangered white-bellied heron (*Ardea insignis*), which took place in this species' stronghold, Bhutan. Less than 60 white-bellied herons in three countries are known, and it is facing increasing threats through civil unrest, climate change and hydropower dam construction. EAZA zoos and the TAG will help support a *ex situ* breeding center to be built in Bhutan and *in situ* conservation activities. The TAG Vice-chair attended the European Stork Village meeting in Čigoć, Croatia, and is very active in supporting white stork research and improving communication between different parties.

Greatest achievement

This year we want to highlight what we consider to be a great achievement of the TAG, but most of all of the EAZA Executive Office (EEO). A great advantage of zoo over free-ranging populations is the ease with which individual animals can be identified, allowing more targeted management and gathering of much useful information. Leg bands with codes that can be read at a distance are the easiest way to identify

individual colonial birds, i.e. most of the species in this TAG. Leg bands vary much in quality and price, prompting the TAG to suggest to the EEO in 1999 that it purchase high quality leg bands in bulk from a good manufacturer for EAZA zoos. This service was initiated in 2000; originally available for pelicans and flamingos only, rings are now available in 12 sizes varying from 10-39 mm in diameter. Since 2000 44,394 rings have been sold to 186 EAZA zoos (61%). Although approximately one-fourth of the rings are used for flamingos, other birds and their managers are benefitting from this service too. The EEO and especially Lilian Fiolet, the staff member currently managing this service, are heartily thanked by the TAG for providing this service and for being very helpful in providing information about it.

Citations

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WATERFOWL AND PELECANIFORMES

Chair: Bernd Marcordes, (Kölner Zoo AG, Germany)

Vice Chair: David Jeggo, (Durrell Wildlife Conservation Trust, Jersey, Channel Islands)

Vice Chair: Johnpaul Houston, (Blackpool Zoo, England)

In 2014 the Waterfowl TAG and the Pelecaniformes TAG have been merged.

The breeding of Anseriformes in EAZA institutions is still very limited. Most institutions regularly acquire birds from the private sector. The breeding success in EAZA institutions cannot guarantee sustainable populations for most Anseriformes species yet.



MALE SCALY-SIDED MERGANSER (*MERGUS SQUAMATUS*) IN BLACKPOOL ZOO.

The newest discussions about pinioning of birds in different EU countries will not influence this trend in a positive way.

In 2015 EEP Evaluations have been initiated for the Dalmatian pelican EEP and Bank cormorant EEP, that will be finalised in 2016. The TAG will propose to downgrade the Bank cormorant EEP to a monitor programme. This small population was established in 2003 on request of the South African Authorities with the aim to gain husbandry experience in Europe and in potential to build up a back up ex situ population in Europe for this highly threatened species. With just two males in the EEP population and with a less pressing need for an back up population due to successful ongoing conservation activities in the wild there is no longer a need for the EAZA population to be managed on EEP level.

The Meller's duck EEP evaluation is scheduled for 2016.

FALCONIFORMES

TAG Chair: Mark Habben (ZSL London Zoo, United Kingdom)

TAG Vice-chair: Kirsi Pynnönen-Oudman (Helsinki Zoo, Finland)

2015 has been a year for planning for the Falconiformes TAG with a view to making a number of changes throughout the approaching 12 months.

The Husbandry and management guidelines for Demonstration birds' were reviewed by a significant number of contributors and were submitted. We are waiting now for approval from EAZA for these guidelines to be considered live.

The TAG Chair will be requesting that contributors form part of a bi-annual review committee to remain current on evolving best practice. The acknowledgements page of contributors has now been collated and added to the final document.

Conferences, Presentations and Updates

The TAG was well represented at the mid-year meeting in Prague where several updates were provided. The TAG Chair lead the presentation and discussion on latest issues, particularly deliberate persecution affecting birds of prey, not least the Hen Harrier (*Circus cyaneus*) and White-tailed sea eagles (*Haliaeetus albicilla*) in the UK before talking about more positive success with the repatriation of an Andean Condor (*Vultur gryphus*) to Brazil and the significant success with Philippine eagles (*Pitheophaga jefferyi*) that won Jayson Ibañez the Whitley Award for conservation. The TAG has been in subsequent discussion with Jayson to look to future collaboration and *ex situ* participation with this amazing species.

The EAZA Annual Conference in Wrocław was also well attended and chaired by Kirsi. There were a number of interesting updates on the Black vulture EEP, the Bearded vulture EEP and associated projects, the Andean Condor EEP and conservation projects, the Egyptian vulture EEP, the Lesser kestrel EEP and studbook updates and presentations on Ruppell's vultures (*Gyps rueppellii*), White-headed vultures (*Trigonoceps occipitalis*), King vultures (*Sarcoramphus papa*) and Imperial eagles (*Aquila heliaca*). Also included was a unique and very welcome presentation on Blood parasites in Snowy owl (*Bubo scandiacus*).

Planned Developments

The TAG, recognising that threats to Gyps vultures and other necrophilous species are global, is planning a TAG committee meeting in Lagos to discuss future programs for vultures within EAZA. First estimates of a 30-year Pan-African vulture decline, confirm that declines have occurred on a scale broadly comparable with those seen in Asia.

In discussion with Campbell Murn of the Hawk Conservancy trust and Jemima Parry-Jones of the International Center for Birds of Prey we are backing the notion that there is no legitimate case for trading species that now qualify as Critically Endangered. If the proposed reason for an import is for inclusion within breeding programmes, we are urging relevant authorities to be aware of the existing and proposed conservation breeding programmes for African vultures proposing that no vultures are exported from Africa. To this end the TAG is proposing a review of all Old World vultures and their existing status within EAZA. We believe that we should be looking to implement programmes or increase the status of all Old World species to ensure that all are at least monitored, but preferably be part of a studbook

or EEP. Given the number of hooded vultures (*Necrosyrtes monachus*) and African white back vultures (*Gyps africanus*) currently held in European collections (and still freely traded and exchanged) we would be better paced to have programs in place for the future protection of these birds. The TAG is in discussion with Scott Tidmus at the AZA to consolidate our strategy for managing Old World vultures within our respective organisations.

Given the concern for Old World vultures it is likely that all Old World species will be proposed for programmes given the number of birds within EAZA collections.

Management changes to programme species

Due to a number of other high-profile commitments both locally and for EAZA, Lars Versteegen relinquished the position of ESB holder for the Secretary bird (*Sagittarius serpentarius*). This position was filled by Graeme Dick of Al Ain in December 2015.

The Falconiformes TAG is very grateful to Lars for his



PHILIPPINE EAGLE (*PITHEOPHAGA JEFFERYI*) IN DAVAO

considerable efforts with this species. The situation and especially breeding results have certainly improved during his management of the programme. We also recognise the challenges ahead for Graeme, not least the conflict that can arise between breeding and rearing for demonstrations before we will have a long term healthy population. This is a consideration that the TAG still encounters for other high-profile managed species, particularly vultures both New and Old World.

Two vulture programmes have been selected to receive qualified EEO support for the production of a Long-term Population Management Plan (LTMP) in 2016. We look forward to the results of this work and hope to provide updates later in the year.

GALLIFORMES

TAG Chair: Jan Dams (Weltvogelpark Walsrode, Germany) TAG Vice-chair: Ludo Pinceel (World Pheasant Association)

Programme coordination and evaluation

During 2015 the Cabot's tragopan (*Tragopan caboti*) ESB became vacant. This leaves us with 3 vacant positions: Cabot's tragopan (*Tragopan caboti*) ESB, Malaysian peacock pheasant (*Polyplectron malacense*) ESB and Malaysian crestless fireback



CABOT TRAGOPAN (*TRAGOPAN CABOTI*) MALE © JOHN CORDER



MALAYSIAN CRESTLESS FIREBACK (*LOPHURA E. ERYTHROPTALMA*) MALE © ROLAND WIRTH

(*Lophura e. erythroptalma*) ESB. The Galliformes TAG is planning steps to increase the profile of these beautiful species to spark interest.

Research, conservation and TAG-produced documents

During the Galliformes TAG meeting in Prague an update was given on the current state of the Edwards's pheasants (*Lophura edwardsi*) genetic research. The first results are highly promising but further feather samples will need to be tested to give a clear view on the genetic purity and genetic diversity within the Edwards's pheasant population. An update was also given on the Congo peafowl EEP. Unfortunately the Congo peafowl population keeps on declining. If a healthy population is to be established a quick increase in the population will be necessary, therefore hand-rearing chicks where advised by the EEP coordinator is very important. There are guidelines for hand-rearing Congo peafowl available on the Galliformes TAG website or through the EEP coordinator.

In Wrocław, a small meeting on Galliformes was held. Jo Gregson talked about the future possibilities for Edwards's pheasants in Vietnam and David Jeggo presented their experiences with parent-raising of this species.

The TAG has also tried to stimulate zoos which currently keep Temminck's, Satyr or Cabot's tragopans to get their birds tested for purity. The World Pheasant Association has given us the opportunity to participate in their genetic study in order to create pure captive populations for all three species. If you want to test your birds please get in touch with Ludo Pinceel (lp.galliformes@gmail.com) for feather taking protocols and further information. The cost to test one bird is approximately €75, a very small amount to help secure a healthy population of these magnificent species.



ATLANTIC PUFFIN (*FRATERCULA ARCTICA*) © ANDREAS TREPTE CC

CHARADRIIFORMES

TAG Chair: Vacant

Vice chair: Nigel Simpson (Bristol Zoo Gardens, United Kingdom)

TAG meetings

The Charadriiformes Taxon Advisory Group did not meet in 2015, mainly as a consequence of the TAG Chair leaving her position and no one being appointed to the Chair. The Vice-chair was also unable to attend any external meetings in 2015. The position of Chair for this TAG is still vacant and anyone willing to take this on should contact the EAZA Executive Office.

Regional collection plan

Regional Collection Plan for Gulls, terns and Alcids was published in 2014, work on the waders has begun, but as yet is not complete.

Publications

Draft Best Practice Guidelines for puffins have been produced by Flemming Nielsen at Copenhagen. As soon as the guidelines are officially approved by the EEP Committee they will be made available on the EAZA website.

PIGEON AND DOVE

TAG Chair: Duncan Bolton, (Paignton Environmental Park, United Kingdom)

VICE Chair: Jo Gregson, (Paignton Environmental Park, United Kingdom)

TAG Meetings:

Unfortunately the planned TAG meeting could not take place during 2015 due to personal circumstances of the TAG Chair.

Important Achievements:

Despite the lack of a formal meeting, the TAG was able to upload a new RCP document to advise members which species we would like EAZA collections to focus on going forwards. This was long overdue and was completed with great diligence by the Vice-chair, working closely with our colleagues in North America. We were also fortunate to secure a new ESB keeper for the Scheepmacker's crowned pigeon and great progress is now being made with this studbook and species management after some time of instability. Our two flagship species, the Socorro Dove and the Pink Pigeon have both continued with excellent



MAURITIUS PINK PIGEON (*COLUMBA MAYERI*) © MIKE LAWRENCE CC

management through the respective coordinators with the support of all holders. We are coming closer each year to the re-introduction of the Socorro Dove to its native island, thank to the efforts of Stefan Stadler and a dedicated group of conservationists. Following on from the Pink Pigeon master planning session in 2014, several collections have worked hard to bring a number of important birds back to the EAZA region from North America, with of course assistance from our colleagues in AZA collections. It is hoped that these birds will help to reinvigorate the EEP population and indeed, 2015 showed improved reproductive success compared to recent years.

PARROT

TAG Chair: Simon Bruslund, (Heidelberg Zoo, Germany)

TAG Vice-chair: Sandra Molloy, (Dublin Zoo, Ireland)

Parrot TAG mission statement

“EAZA Parrot TAG’s mission is to facilitate and enhance cooperation on parrot conservation within the European zoo and aquarium community. The aims include maintaining sustainable *ex situ* populations, educating the public, encouraging contributions to scientific research and supporting *in situ* conservation of parrots. It will achieve these aims by providing the community with information and structures to assist and improve population management, husbandry methods and conservation project review and by also evaluating and sharing calls for cooperation from outside the community.”

Regional Collection Plan (RCP)

The Regional Collection Plan will be finalised in spring 2016. Roles and targets are being identified for each programme in the RCP. Currently the Parrot TAG is actively seeking volunteers to help manage the programmes with vacancies. There have been a number of proposed changes to breeding programmes which will be finalised in 2016.

The new RCP will create more specific aims for the monitoring (MON) role. Before ZIMS was established the MON role was necessary to keep track of certain species’ populations in EAZA. ZIMS has now made this task much simpler and quicker. However, some species need more than just keeping track of the numbers. For example, the coconut lory (*Trichoglossus haematodus*) is often housed in public-

feeding areas so there is a need to establish guidelines to safeguard their welfare. In addition to this, this species also competes for space with endangered *Trichoglossus* species so a monitor for the coconut lory could work closely with programme managers for endangered *Trichoglossus* species to identify space opportunities.

Monitoring roles became active in 2015 for the following species:

- Timneh parrot (*Psittacus timneh*)
- Grey parrot (*Psittacus erithacus*)
- Mitchell’s lorikeet (*Trichoglossus forsteni mitchellii*)
- Sun conure (*Aratinga solstitialis*)
- Vinaceous-breasted Amazon (*Amazona vinacea*)
- Green-thighed parrot (*Pionites leucogaster*)

Zoo collection planning

The Parrot TAG provided advice to almost a dozen institutions in 2015 on how best to include parrots in their collection planning.

Parrot TAG Evaluations

Evaluations begun in 2015 for the following EEPs and should be completed in early 2016: citron-crested cockatoo (*Cacatua sulphurea citrinocristata*), Ecuadorian Amazon (*Amazona lilacina*) and red-vented cockatoo (*Cacatua haematuropygia*). Overall, 50% of species committee members and 58% of participating institutions completed the evaluation questionnaires. Higher return rates of evaluation questionnaires are expected during the next set of evaluations which will commence in 2016.

Meetings

The mid-year Bird TAG meeting was hosted by Prague, Plzeň and Zlín-Lešná in the Czech Republic. Various aspects of husbandry were discussed and volunteers were encouraged to take on monitoring roles.

A Parrot TAG meeting took place in Wrocław, Poland on the 16th September during the EAZA Annual Conference. The Chair, Simon Bruslund, provided an overview of the current TAG structure, the RCP development and current programme vacancies. He highlighted the need to establish specific purposes and aims for breeding programmes and the additional roles of those monitoring a population. The Vice-chair, Sandra Molloy, provided an overview on EEP evaluations within the Parrot TAG and the current situation of Amazon Parrots in EAZA zoos. Two EAZA parrot populations were highlighted – the Vinaceous-breasted Amazon (*Amazona vinacea*) by



RED-VENTED OR PHILIPPINE COCKATOO (*CACATUA HAEMATUROPYGIA*) © PETER WIDMANN

Yveta Svobodová (OSTRAVA) and the Sun conures (*Aratinga solstitialis*) by Tjerk ter Meulen (KERKRADE). Finally, two presentations were given on parrot *in situ* conservation projects – the conservation of the Critically Endangered grey-breasted parakeet (*Pyrrhura griseipectus*) in north-east Brazil by Mateusz Styczyński (NGO AQUASIS) and the conservation of Philippine Cockatoo (*Cacatua haematuropygia*) by Indira and Peter Widmann (KATALA FOUNDATION).

Amazon Parrot Space Workshop

In Wrocław in September 2015, the Parrot TAG held a separate workshop to address the lack of space for threatened Amazon parrots in EAZA. There are almost 900 Amazon parrots in EAZA zoos but only half of these spaces are for threatened Amazon species. It is important that threatened species are managed as otherwise they may disappear from EAZA zoos which is what happened with the Tucuman Amazon (*Amazona tucumana* - Vulnerable). The numbers in EAZA went from 50 to 3 birds over the course of a few years. It is assumed that a number of holders decided to stop keeping this species independent of each other.

The current Amazon parrots EEPs – Ecuadorian Amazon (*Amazona lilacina* - Endangered), Green-cheeked Amazon (*Amazona viridigenalis* - Endangered) and Red-tailed Amazon

(*Amazona brasiliensis* - Vulnerable) - currently only take up 17% of the space available for Amazon parrots. These three EEP populations are quite low with space being a limiting factor. The Parrot TAG would also like to create an additional five ESBs for the Black-billed Amazon (*Amazona agilis* - Vulnerable), Lilac-crowned Amazons (*Amazona finschi* - Vulnerable), Vinaceous-breasted Amazon (*Amazona vinacea* - Endangered), Yellow-billed Amazon (*Amazona collaria* - Vulnerable) and the Yellow-shouldered Amazon (Vulnerable). Currently these five species account for 20% of the available space for Amazon parrots.

The workshop was attended by 16 people and a number of suggestions were put forward. These include creation of large single-sexed flocks, increased cooperation with non-EAZA institutions, rescue centres and private aviculturists, liaising specifically with EAZA institutions keeping non-threatened Amazon parrots and generating more interest in threatened Amazon species. An Amazon parrot committee was established from those who attended the workshop.

Members of the Amazon parrot committee highlighted this issue with national zoo associations in France and the UK.

Publications

The Parrot TAG produced two posters highlighting the space

issues for threatened Amazon parrots. These posters were on display during the EAZA Annual Conference in Wrocław in September.

Conservation and Research

Parrots are one of the most threatened orders of birds with 28% of species classified as endangered. One of the Parrot TAG's goals is to play an important role in parrot conservation. Conservation and research projects are endorsed by the Parrot TAG for the following species:

- Yellow-crested cockatoos (*Cacatua sulphurea*) - CR (Critically endangered)
- Philippine Cockatoo (*Cacatua haematuropygia*) - CR
- Moluccan cockatoo (*Cacatua moluccensis*) - VU (Vulnerable)
- Mitchells Lorikeet (*Trichoglossus forsteni mitchellii*) - EN (Endangered)
- Red and Blue Lorikeet (*Eos histrio*) - EN
- Swift Parrot (*Lathamus discolor*) - EN
- Grey-breasted Parakeet (*Pyrrhura griseipectus*) - CR
- Blue-throated Macaw (*Ara glaucogularis*) - CR
- Vinaceous-breasted Amazon Parrot (*Amazona vinacea*) - EN

Please contact the Parrot TAG for more details if you are interested in any of the above.

TOUCAN AND TURACO

TAG Chair: Harald Schmidt, (Rotterdam Zoo, Netherlands)

TAG Vice-chair: Laura Gardner, (London Zoo, United Kingdom)

After a few years of inactivity the Toucan and Turaco TAG saw some changes in 2015. Since the tragic death of its Chair John Ellis in 2012, only one meeting was held in Alphen (The Netherlands) in 2014.

In 2015 a new start was made with the appointment of a new Chair (Harald Schmidt, Rotterdam Zoo) and a new Vice-chair (Laura Gardner, London Zoo).

Earlier in 2015 the first 'EAZA Best Practice Guidelines for Red Crested Turaco's' were published. Louise Peat (Cotswold Wildlife Park, UK) did a great job and these Best practice guidelines could serve as a model for more Turaco species.

In Rotterdam Zoo a student (Tom Verschoor) did his thesis on the problems of keeping and breeding Toco Toucans in



NORTHERN CARMINE BEE EATER (*MEROPS NUBICUS*) © ROB DOOLAARD IZP

EAZA collections. An abstract of his work was published in Zooquaria. Tom presented his findings also at the ICZ Congress in Leipzig (September 2015).

Since the Hoopoe ESB has been without a Studbook keeper, the decision was made to downgrade this ESB as it was felt that this display species does not meet the criteria for an ESB.

The Toco Toucan studbook was published at the end of 2015. Adrian Walls (ZSL London Zoo) has decided to step down as ESB holder for this species and a proposal has been made for this ESB to be taken on by Laura Gardner (ZSL London Zoo).

The Toucan and Turaco TAG is facing a lot of challenges. Ramphastids in general have significant sustainability issues in zoological collections and the future does not look very bright. The enormous taxonomic scope of this TAG is another issue that needs to be discussed for the future. Many species that were present 10 years ago have completely disappeared from our collections and many more species are not bred in the numbers needed to sustain these small populations.

HORNBILL

TAG Chair: Koen Brouwer (Attica Zoological Park, Athens, Greece)

TAG Vice-chair: Joost Lammers (Vogelpark Avifauna, The Netherlands)

The mission of the EAZA Hornbill TAG is to:

- coordinate EAZA's ex situ breeding and management efforts for hornbills, ensuring that these hornbill populations fulfil the conservation, education, research and exhibition roles that have been assigned to them;
- strive for the highest standards in welfare and professional management of hornbills living in EAZA zoos;
- establish priorities for conservation and research for species included in the collection plan;
- encourage and coordinate participation in *in situ* conservation activities; and
- promote cooperation between EAZA members and others with similar hornbill related missions.

Organisation

Baptiste Mulot (Beauval) stepped down as ESB keeper for both *Bucorvus* species. New coordinators were approved by the EEP Committee for the Northern ground hornbill (*Bucorvus abyssinicus* - Marion Poupé, Zoo de la Boissière du Doré) and the Southern ground hornbill (*Bucorvus leadbeateri* - Anna Kazazou, Attica Zoological Park).

The Hornbill TAG was evaluated in 2015 and most TAG members participated in this effort. The EEP Committee concluded that the functioning of the Hornbill TAG is considered as sufficient/good. Overall it was felt that there should be far more focus on husbandry research, trial set-ups related to global cooperation as we do not seem to be able to tackle the key issues in keeping healthy populations of hornbills, certainly for some of the Asian species. Full commitment from the TAG membership is required to improve this. The TAG was also complimented on its efforts to support *in situ* projects, especially in Asia.

During the year several draft Hornbill TAG logos were designed by Paignton Zoo and Attica Zoological Park. These were presented to the TAG members and will be officially approved by the TAG in the early part of 2016.

Breeding programme developments

New holders are needed in some of the managed species, such as the Von der Decken's hornbill ESB, the Malayan black hornbill ESB and the Visayan tarctic hornbill EEP.

The Bar-pouched wreathed and Papuan wreathed hornbill ESBs as well as the Rhinoceros hornbill EEP worked further with the North American colleagues (AZA) on transfers of hornbills to Europe and exchanges of hornbills between the regions.

Great hornbills continue to cause the TAG and EEP major worries but there was some good news in 2015, as eggs were reported in 3 institutions. No chicks yet but this gives us some hope for the near future.

Regional Collection Plan

The draft Regional Collection Plan was presented to the TAG members and others attending the EAZA Annual Conference in September 2015 and will be finalised and approved at the upcoming Hornbill TAG meeting in Lagos (Portugal) in May 2016.

Husbandry Guidelines

An updated version of the current EAZA Hornbill Management and Husbandry Guidelines (2002) is still in preparation. The TAG is making an effort to finalise and publish new Best Practice guidelines.

Meetings

The TAG met once in Wrocław (Poland) on 17 September 2015.

Conservation activities

The Hornbill TAG continues its efforts to stimulate conservation-related activities for hornbills. Currently the TAG and its members are directly involved in conservation efforts in Southeast Asia, the Philippines, and Southern Africa.

The EAZA Hornbill TAG is in close contact with several conservation-related groups in the Philippines on establishing urgently needed conservation measures for the Critically Endangered Sulu hornbill. One of the conservation options suggested would be to collect chicks from nests in the wild and start an *in situ* captive breeding programme following the success of some other similar programs on the Philippines. Surveys to determine the number of birds remaining in the wild as well as nest protection schemes also need to be established.

The Helmeted hornbill (*Rhinoplax vigil*) is unique in having a plate of solid ivory in its casque. There is a long history of hunting this species for ornamental use of the casque. Research in West Kalimantan alone showed that an average of 500 birds were killed each month in 2013. More recent



GREAT HORNBILL (BUCEROS BICORNIS) © ROB DOLAARD

examples of confiscations in Southeast Asia show that the trade is quite severe and numbers involved are high. Urgent measures are needed to save the species. The Saving the Majestic Helmeted Hornbill Project was launched in 2014 and funding is urgently required. EAZA zoos will be requested to assist in the efforts required to save this now IUCN Critically Endangered species from extinction.

The TAG together with the Southern ground hornbill ESB and several EAZA zoos actively supported the Mabula Ground hornbill project's effort to raise funding for a breeding and release centre for Southern ground hornbills.

The Hornbill TAG continues to actively encourage EAZA zoos keeping hornbills to "adopt a hornbill nest" of *R. undulatus*, *A. albirostris*, *B. bicornis*, *B. rhinoceros*, *R. vigil*, and/or *A. nipalensis* in either Thailand or India. Adoption of a nest costs approximately €125, an amount that any zoo can afford in an effort to annually fledge a hornbill in the wild. Two heavily imprinted Great hornbill females (both are not suitable for breeding) are now performing in free flight educational presentations in EAZA zoos and collecting money for the hornbill nest adoption projects.

There is unfortunately still much trade in wild caught Southern ground hornbills, especially from Tanzania. At the upcoming Conference of the Parties in 2016 a proposal to list the Southern ground hornbill on CITES II may be put forward.

PASSERIFORMES

TAG Chair: David Jeggo (Durrell Wildlife Conservation Trust, Channel Islands)

TAG Vice-chair: Theo Pagel (Kölner Zoo, Germany)

Asian Songbird Crisis

The subgroup of the TAG, now called the Threatened Asian Songbird Alliance (TASA), set up to work on the conservation of Asian songbirds affected by trade, continues to be very busy and active.

The impact of trapping for the caged bird industry is causing massive declines in songbird population throughout Southeast Asia and driving a growing list of species towards extinction. There is a very real danger that we will lose even once common songbirds.

The seriousness of the situation is now gaining wider recognition and in September a group of 34 experts gathered at Jurong Bird Park in Singapore for the "Asian Songbird Crisis Summit", a meeting to address this hosted by Wildlife Reserves Singapore who jointly organised this with TRAFFIC Southeast Asia and Cikananga Conservation Breeding Centre (CCBC). TASA was well represented among the delegates. At the public seminar that opened the summit, Professor Nigel Collar, of BirdLife International, gave a presentation "EAZA's Threatened Asian Songbird Alliance (TASA), An Outside View on the Crisis" on our behalf.

The summit tackled four broad topics that the participants considered most important to address. These were:

- Field and Genetic Research
- *Ex Situ* Breeding and Husbandry
- Outreach, Education and Communication
- Trade, Legislation and Enforcement

A list of 27 species most affected by the trade was drawn up and from this twelve were identified as being priorities for immediate action to prevent their extinction. For most of these it is recommended that *ex situ* breeding programmes are established as a matter of urgency. Efforts are already underway for several of them at in-country breeding stations and for some as EAZA programmes.

For one, the iconic Bali starling (*Leucopsar rothschildi*), there is a well-established and long-running programme, and for which it is well known that despite reintroduction poaching remains a major obstacle to its recovery in the wild.

Immediately after the summit the Bali starling was the subject of an international workshop, organised and hosted by Tony Sumampau at Taman Safari in Bali. Representatives of the EAZA TAG travelled on to Bali and participated in this workshop. In recent years *in situ* support from some EAZA institutions had been given to the Begawan Foundation for their work with Bali starling, but it has been some years since there has been any involvement with the Indonesian authorities to assist with the species recovery in the Bali Barat National Park. A positive outcome of the workshop therefore was the drafting and signing of an agreement that will lead to the formation of a Bali Starling International Advisory Board and hopefully the beginning of a new chapter in cooperation, with everyone, in efforts to restore a free-living population of this charismatic bird.

Another of the twelve species given priority at the summit is the Javan green magpie (*Cissa thalassina*). An EEP was approved for it during the year, with Andrew Owen at Chester Zoo as coordinator. In December six pairs were imported to Chester from CCBC via Taman Safari. These birds are as far as we know the only ones outside of Indonesia. Within Java the magpie is breeding successfully at CBCC and birds are now also at Taman safari. This developing *ex situ* population of some forty birds might prove vital to this species survival, for the remaining wild population of possibly less than 100 remains very vulnerable to trapping.

Also on the list of the 12 species identified as priorities is the Sumatran laughingthrush (*Garrulax bicolor*), for which there is a well established ESB within EAZA. This programme was boosted by additional birds from Indonesia being imported along with the Javan green magpies. This species is not so easy to breed, and hampered by an unbalanced sex ratio in favour



BALI STARLING (*LEUCOPSAR ROTHSCILDII*) © GREGORY GUIDA

of males. *In situ* work from this species is being supported by Liberec and Heidelberg zoos.

The hill myna (*Gracula (religiosa) robusta*) from Nias Island, which lies off the southwest coast of Sumatra, is also on the priority list. Hill mynas may regrettably no longer exist on Nias, but other nearby islands still do harbour them. Heidelberg and Liberec zoos are also working on the taxonomy and conservation of these island forms of the hill myna. No Nias hill mynas are held in European zoos but the monitoring of the hill myna taxa that are in EAZA institutions has begun, to help gain an insight into their husbandry requirements and developing protocols that could be applied to assisting the Nias hill myna.

Chinese Species programmes

From China two threatened species are the subjects of programmes. There is an ESB for the Omei Shan liocichla (*Liocichla omeiensis*). Chris Green (Cotswold Wildlife Park) was approved as new studbook keeper for this programme back in 2014, and is now actively managing this population.

The ESB for the Critically Endangered Blue-crowned laughingthrush (*Dryonastes courtoisi*), with a wild population of only some 250 surviving on central China, the ESB was upgraded to an EEP. The species is one of now nine that have been designated by WAZA as a GSMP. The annual meeting that the GSMP holds again took place in Europe, this time in Lyon, where it was good to be able to welcome a number of Chinese colleagues. As an outcome of the meeting the third Management Plan was published. It is encouraging to see the *ex situ* population growing to 245 in total of which 169 are in the EEP.

The Hooded pitta (*Pitta sordid*) ESB was transferred from Arnhem to Waddesdon Manor with Ian Edmunds taking over from Wineke Schoo. The captive population in Europe continues to struggle but interest remains strong in these “jewels of the forest”. And nonetheless experience with them in zoos could lead to developing techniques that could be applied to assisting failing wild populations.

Non-Asian species

With so much attention, due to the pressing conservation needs, on Asian species those from elsewhere in the world have not featured massively in the TAG’s activities. However a new coordinator was approved for the Brazilian tanager (*Rhampocelus bresilius*) ESB, with Trevor Franks taking over from Nigel Simpson at Bristol.

Meetings

The TAG met twice during the year as did TASA. The main three day meeting of TASA was held in conjunction with the mid-year Bird TAGs meeting at Prague in May where the TAG had a session as well. The other meetings were held during the Annual Conference in Wrocław.

MONOTREME & MARSUPIAL

TAG Chair: Udo Ganslosser (Greifswald University, Germany)

Vice-chair: Achim Winkler (Zoo Duisburg, Germany)

The Monotreme & Marsupial TAG had two meetings during the Annual Conference in Wrocław in September 2015. Both an open and a closed meeting were held. The most important issues to be discussed in the closed meeting, and reported in the open one, were the establishment or preparations for establishing EEPs for the Tasmanian devil and the Rabbit-eared bandicoot or Bilby. The Tasmanian devil, a marsupial carnivore currently restricted to Tasmania and threatened, among other reasons, by the occurrence of an infectious facial tumor, is a species that ecologically has similarities to hyenas on other continents.

The bilby is a desert-living species, highly endangered and with a very restricted geographical range.

For both species Australian colleagues have long-running

successful breeding programmes, and now there are plans to export some surplus animals into scientifically managed programmes in other zoo regions.

The recent version of the Regional Collection Plan was prepared by a master’s student from Würzburg University, Miriam Mischke. The briefing document for decision making was submitted as her MSc thesis and is available on the TAG web space. No substantial comments have been made by the TAG membership, thus we can regard the plan as, for the time being, adopted as a living document.

Important breeding activities were recorded in the Quoll monitor programme and the Common wombat EEP. Congratulations to those zoos that achieved successful reproduction in these high-profile species which, similar to the two new ones mentioned above, are valuable additions for educational and scientific purposes in our marsupial collections.

Flemming Nielsen from Copenhagen Zoo was proposed as vice chair, following the resignation of Peter Dillingham from Blackpool Zoo. We heartily thank Peter Dillingham for his long period of successful leadership in the TAG.

The Brush-tailed bettong EEP had some important imports from North America.

Robert Lawrence will be nominated as coordinator for the Bilby EEP.

The following contributions to conservation projects have been made by the TAG:

- contributions of the Goodfellow’s tree kangaroo EEP to projects in Papua New Guinea
- contributions of the Koala EEP to koala projects, coordinated by San Diego Zoo (USA)



GREATER BILBY (*MACROTIS LAGOTIS*) © BERNARD DUPONT CC

PROSIMIAN

TAG Chair: Achim Johann (Naturzoo Rheine, Germany)

Tag Vice-chair: Delphine Roulet (Paris Zoo, France)

The overall working goal for the TAG in the course of the year was enhanced cooperation – within EAZA, with AZA and with *in situ* conservation NGOs as well as the government of Madagascar – to ensure sustainable populations of prosimians in zoos and to form effective links to *in situ* conservation activities.

So the mid-year meeting, which was generously hosted by Plzeň and Prague Zoos, saw the participation of both TAG members and among others representatives from the Madagascar ministry of environment MEEMF, the Madagascar primate research and conservation organisation GERP and Andrea Katz who represented AZA Prosimian TAG, Duke Lemur Center and MFG (Madagascar Fauna Group).

At that meeting a complex collaboration between EEP, SSP and MEEMF (the latter one representing several *ex situ* facilities in Madagascar) to establish an “*ex situ* rescue-population” for the Critically Endangered blue-eyed black lemur (*Eulemur flavifrons*) was agreed on. As a result transfers of lemurs from the SSP to the EEP, from Zoo Ivoloina in Madagascar to the SSP and between facilities within Madagascar were decided and later confirmed by a contract signed by all parties involved. It is really satisfying for the Prosimian TAG to see the MEEMF applying the principles of coordinated breeding programmes they learnt from participating in TAG meetings and from individual coaching over the past four years.

As requested by the MEEMF, the TAG and in particular Delphine Roulet, Vice-chair, took the lead in organising a Ex situ Management Workshop in Madagascar. A total of 54 participants - representatives including directors and technicians from 12 Madagascar institutions keeping lemurs, from national and regional authorities, from associations and NGOs and veterinarians and veterinary students – met for four days in the Ministry of Higher Education and Parc Botanique and Zoologique Tsimbazaza in Antananarivo. The workshop covered *ex situ* management of lemurs, theory and practice of breeding programmes and educational potential of public animal collections. There were also practical workshops to improve the quality of husbandry in Tsimbazaza Zoo and other places. Overall the Ex situ Management Workshop was rated as very successful and of high value.



HAPPY FACES AFTER AGREEMENT OF GLOBAL EXCHANGE OF BLUE-EYED BLACK LEMURS
© ACHIM JOHANN, RHEINE

Partly as a result of this workshop, the TAG is working on establishing a tool for supporting *ex situ* conservation in Madagascar, tentatively entitled “Zoos for lemurs: The Prosimian TAG’s fund for *ex situ* capacity building.” Previously this kind of engagement had been made possible by very individual support – both financial and manpower – namely by Delphine Roulet and Paris, Mulhouse, Besancon and Rheine Zoos as well as from EAZA funding. The “*ex situ* capacity building fund” is regarded as essential to ensure continuity of such important initiatives.

The TAG welcomed new members. Florence Perroux from La Palmyre Zoo fills in the new position of an “Education and Communication Manger”. As such she started work on fact-sheets to promote the *in situ* projects which are supported by the TAG.

Richard Brown, Dudley Zoo, stepped in for Derek Grove as coordinator of the Black lemur EEP, Johannes Köhler replaced Rüdiger Dmoch as coordinator of the Slender loris EEP.

Two new ESBs were inaugurated, namely for Slow lorises (*Nycticebus coucang*, *Nycticebus bengalensis*), which will facilitate handling confiscated animals and also cooperate with rescue centers in Southeast Asia. All taxa of *Nycticebus* are now listed as at least Endangered and they deserve all attention in the same way as Madagascar lemurs. Nic Dunn, Shaldon Wildlife Trust is coordinator of the *Nycticebus* ESBs.

Research focused on reproductive parameters in Mongoose lemurs and taxonomy of Ruffed lemurs. Results might have an impact on the existing breeding programmes.

Topics for the further work of the TAG will be updating the Regional Collection Plan, initiating a workshop for Lorisids, strengthening the interregional cooperation and continuing the cooperation with Madagascar on basis of the “*ex situ* capacity building initiative”.

CALLITRICHID

TAG Chair: Eric Bairrão Ruivo (ZooParc de Beauval, France)

TAG Vice-chairs: Dominic Wormell (Durrell Wildlife Conservation Trust, Channel Islands); Miranda Stevenson (Bristol Zoo Gardens, United Kingdom)

The TAG has 22 members and covers eight EEPs, three ESBs, monitors four species (and their subspecies) and also monitors other callitrichids in EAZA collections that are not part of programmes.

2015 was another busy and productive year, with two meetings held, one at the EAZA Annual Conference in Wrocław in September and the other a mid-year meeting in Amsterdam in March.

Programme coordination and evaluation

One TAG membership change occurred in 2015. A new coordinator was required for the *Saguinus labiatus* ESB at the start of the year. In the short-term the TAG is managing the programme with the intention of Aude Haelewyn-Desmoulin (Reynou) taking over in the future; in the meantime she will be running the ESB for the TAG.

With seven evaluations completed, only one programme remained to be done in 2015 - that of the cotton-top tamarin *Saguinus oedipus*. The work for the evaluation was completed during the year but the final report will not be ready until 2016. A full update on all programmes is in the minutes of the 2015 meeting in Wrocław, which is on the EAZA website.



GOLDEN LION TAMARIN ((LEONTOPITHECUS ROSALIA)

One issue that has greatly concerned the TAG is thefts of callitrichids. In the past two years, thefts involving five species have occurred in six collections. EAZA has now sent out a questionnaire to members concerning thefts.

In preparation for the joint TAG meeting in Omaha in 2016, progress on the recommendations from the 2015 Alphen meeting was reviewed, these involve five species: *C.pygmaea*, *C.geoffroyi*, *S.i.subgriscenscens*, *C.goeldii* and *S.oedipus*. Progress was made, through discussion, on increasing interregional cooperation with cotton-top tamarins, the view being that there may be different components of genetic variation in zoo populations.

Research and TAG-produced documents

A detailed space-survey questionnaire was prepared and trialled. The revised questionnaire will be sent out to holders and analysed in 2016.

A TAG statement on *The Keeping of Callitrichids by Private Individuals* received full approval and is listed in the Best Practice Guidelines.

Anthony Rylands and Peter Galbusera continued to update the TAG with information on research publications on Callitrichids.

The TAG participated in research projects on diabetes in primates, contraceptive methods and marmoset wasting syndrome.

The TAG newsletter continued to be produced and sent out to members, approximately every six weeks and was featured in an edition of EAZA E-news.

Work continued on encouraging collections to implement and use the Regional Collection Plan (RCP) for Callitrichids, completed in 2014. ALPZA is translating them into Spanish.

Work on converting and updating the Callitrichid Husbandry Guidelines to Best Practice Guidelines (BPG) was completed and the Guidelines were approved by the EEP Committee and are now available in the public area of the website. The TAG is in the process of producing some 'user-friendly' documents such as video clips to accompany these Guidelines.

Callitrichid Training Guidelines for scale training were produced and are available on the website.

A process of regular updating of TAG documents was initiated. The RCP will be updated when the new Red Listings come out in 2016. A rolling programme for updating the BPG has identified topics to be completed in 2016, which includes the veterinary and nutrition sections.

Conservation

The TAG currently supports field conservation of *S.oedipus* and *S.leucopus*, in Colombia and *L.rosalia*, *L.chrysopygus*, *L.chrysomelas*, *S.bicolor* and *C.aurita*, in Brazil. As Gabriela Rezende and Jim and Lou Ann Dietz were present at the EAZA Conference in Wrocław, a special lion tamarin meeting was held for the species committees, and plans made as to how the TAG could increase assistance for the species. Jim's presentation emphasised that we must not become complacent through the success of the GLT project in Brazil but continue to provide support for the AMLD campaign through informing visitors, making a financial commitment to AMLD and contributing ideas and expertise.

Gabriela explained that the black lion tamarin is a symbol of wildlife conservation in the state of São Paulo. Support by EAZA members for the Corridors for Life project helps achieve the goals, which include the establishment of at least two self-sustaining viable populations in a wider and connected habitat.

Rosamira Guillen updated on Proyecto Tití, the main threats being forest destruction and collection for the pet trade. Zoos can make an enormous contribution to helping save this species, and EAZA does this through the Cotton-top Tamarin Club, the membership of which is increasing. An excellent way zoos can fundraise for the project is by holding a cotton-top tamarin day in August and by sponsoring a 'titi post'.

Dominic Wormell continued to lead the support of the pied tamarin project and ran a workshop on conservation and husbandry of callitrichids, following the Brazilian Primatology Congress in Manaus. Species highlighted were the black lion tamarin, pied tamarin and buffy-tufted-ear marmoset. At the conference Dom was awarded a trophy by the Brazilian Congress of Primatology for his contribution to the conservation of pied tamarins. An achievement to be proud of.

Beauval Zoo, and its conservation association Beauval Nature, continued with their excellent work supporting the white-footed tamarin conservation programme in Colombia. Purchase of land has now been arranged which will be donated to the Florencia National Park. A tripartite agreement was signed between the programme, ACOPAJOA and the National Parks Board of Colombia. The TAG Chair also attended to the Colombian Zoology Association conference in Caragena where he gave a presentation on integrated conservation.



COTTON TOP TAMARIN (*SAGUINUS OEDIPUS*) - © PROYECTO TITÍ - JULIETT GONZÁLEZ

Major achievements 2015

There were several achievements: the implementation of the RCP, the completion of the BPG and Training Guidelines and having three field workers attend the EAZA TAG meeting with two of them also giving papers at the Conservation Plenary Session. This assisted in advancing the support that the TAG gives to conservation in the wild, which is also a focus of the RCP.

CEBID

TAG Chair: Jan Vermeer (Parc Animalier de Sainte Croix, France)

TAG Vice-chair: Adrian Baumeyer (Basel Zoo, Switzerland)

2015 was a year of transition for the EAZA Cebid TAG. In September, both the TAG Chair, Frank Rietkerk (Apeldoorn) and Vice-chair Kirsten Pullen (BIAZA) stepped down and were succeeded by Jan Vermeer (Parc Animalier de Sainte-Croix, France) and Adrian Baumeyer (Basel Zoo, Switzerland) respectively.

There were few programme changes compared to the previous year, although Alison Dowling stepped down as coordinator of the Common squirrel monkey (*Saimiri sciureus*) EEP. This is not an easy programme to manage due to the large number of animals in the population, uncertainty about their provenance and incomplete studbook data. Edinburgh Zoo has indicated that they would like to keep the programme and are looking for a successor for Alison.

In May 2015, the TAG convened in Apeneul in The Netherlands for a combined Cebid TAG and Woolly monkey EEP meeting. It was an excellent meeting, attended by 16 people. Jan Vermeer, who had been involved in a Neotropical Primates Red Listing workshop a few months earlier, kicked off with an update on the current taxonomy of non-callitrichid Neotropical primates. There is no doubt that further changes in this taxonomy will be required – if for no other reason that new taxa are still being found and described. One of the most notable changes is the reduction of the Common squirrel monkey “group” to the monotypic Guianan squirrel monkey (*Saimiri sciureus*), and that taxa that were until now considered to be subspecies of this taxon have been given either full specific status or were submerged in other taxa. The sakis have undergone a major revision which was well publicised and this also led to a much needed better understanding of the species and subspecies in this group. Unfortunately, in this case, the split of White-faced saki into two different species (*Pithecia pithecia* and *Pithecia chrysocephala*) has given rise to a serious worry about the



RED HOWLER MONKEY (*ALOUATTA SENICULUS*), APENEUL

taxonomic unity of the White-faced saki EEP. Matt Webb, the coordinator of this programme, will need to do a good amount of research. It seems likely that it cannot be resolved on the basis of pelage colour only. Tjerk ter Meulen presented an overview of non-managed Cebid taxa in Europe, Peggy Rueb gave an overview of taxonomic and other problems in douroucoulis, and Florine Wedlarski and Gea Karssemeijer elaborated on issues in the spider monkey programmes.

During the special session on Woolly monkeys, attention was given to possibly vitamin D-related disease symptoms, which are being investigated by Christine Kaandorp of GaiaZoo, and, again, to taxonomy. It is researcher Philippe Hensen’s conclusion that the Woolly monkey population is a hybrid population suffering from outbreeding depression.

The last session of the meeting was about squirrel monkeys and management strategies to prevent further surplus that cannot be relocated to other zoos. The meeting concluded with a relatively short session on conservation. It has long been a point of discussion that there are too few good conservation projects for the larger Neotropical primates, and this has something to do with the fact that only a handful of the managed species are endangered or critically endangered, and some live in very remote or politically unstable parts of South America.

An action list was drawn up, listing all the agreed next steps for the various programmes and the TAG, and this will be used to provide guidance for the next meetings. The TAG may get a new name in 2016 to address the fact that the term “Cebids” does not accurately describe the species it manages.

OLD WORLD MONKEY

TAG Chair: Neil Bemment (Paignton Zoo, United Kingdom)

TAG Vice-chair: Tjerk ter Meulen (Gaia Zoo, The Netherlands)

Old World Monkey TAG Mission Statement:

“To encourage the good management of Old World Monkeys in EAZA collections and associated institutions by means of promoting high standards of husbandry and Regional Collection Planning with a view to establishing self sustaining populations in human care for the purposes of education, research, *ex situ* conservation and the support of *in situ*



L'HOESTS MONKEY AT WROCLAW ZOO – A GROWING POPULATION conservation initiative.”

TAG meetings

The EAZA Old World Monkey TAG held ‘closed’ Core Group and ‘open’ Holders’ sessions for all attendees at the 2015 Annual Conference hosted by Wrocław Zoo, Poland. The chairman also attended a Joint AZA / EAZA OWMTAG meeting held in Sarasota, Florida which was hosted by his opposite number, AZA OWMTAG Chairman Joe Knobbe (Saint Louis Zoo) and Vice-chairs, Tom Ness (Minnesota Zoo) and Rebecca Phillips (Disney Animal Kingdom).

Update on the breeding programmes development

Changes in Programme Manager:

- Eastern black & white colobus monkey ESB: Andrew Hope (Belfast Zoo, UK)
- Talapoin monkey ESB: Miguel Casares (Bioparc Fuengirola, Spain); yet to be ratified

Upgraded Programmes

- Golden-bellied managabey ESB to EEP: Tjerk ter Meulen (GaiaZOO, The Netherlands)

Downgraded Programmes:

- None in 2015

OWM EEP Evaluations

- Javan langur due in 2015 – papers circulated; evaluation in hand

Programme challenges

The challenge for the future management of European zoo Old World monkey populations persists, namely the declining trends for many of the endangered taxa that started with only a few founders, a lack of new holders for certain taxa for which the populations need to be expanded, and a need to rationalise certain populations that have been allowed to grow largely unchecked.

The main issues for discussion in 2015 were those of:

- Mixed species exhibit survey (Tjerk ter Meulen, GaiaZoo)
- Contraception survey (EGZAC)
- Incidence of diabetes in OWMs (Yedra Felter, ZSL)
- Breed and Cull as a tool for managing OWMs
- Regional Collection Plan ‘decision tree’

The following were among the new actions identified:

- Publish Masterplans for *Mandrillus sphinx* and *Macaca silenus*
- Re-open discussions with new PASA Director, Greg Tully regarding future cooperation between PASA and EAZA

Context of past and upcoming work

Closer links with the IUCN African and Asian Primate Specialist Groups were created during 2015.

Further to the Master-Planning Days held in 2014 for Lion-tailed macaque (*Macaca silenus*) (at VogelPark, Alphen aan den Rijn) and Mandrill (*Mandrillus sphinx*) (at Budapest Zoo), draft MPs are being prepared by the the respective EEP Coordinators, namely Alex Sliwa (Köln Zoo) and István Vidákovits (Budapest Zoo), in collaboration with Kristine Schad (EAZA Office). Individual animals have been identified that could be of benefit to the AZA populations though only the export of one male Mandrill (Chester Zoo to Disney Animal Kingdom) took place in 2015.

Involvement of OWMTAG in Conservation activities

The following *in situ* conservation initiatives are endorsed by the OWMTAG:

- Barbary macaque conservation in the Rif Mountains
- WAPCA activities in Ghana for Roloway monkey and White-naped mangabey including the following project: *The Kwabre Community Rainforest Project – protecting Ghana’s forests and endangered primates through community-led conservation.*
Primary researchers: David Osei & Andrea Dempsey
- François’ langur conservation in China and Cat Ba langur conservation in Vietnam.
- Drill conservation in Nigeria
- Angolan Colobus Project in Kenya

Most important achievement of the TAG in 2015

Fostering closer links with the AZA Old World Monkey TAG with a view to even greater cooperation in the future.

GIBBON

TAG Chair: Charlotte Macdonald (Twycross Zoo, Twycross, United Kingdom)

TAG Vice-chair: Brice Lefaux (Mulhouse Zoo, France)

Currently the TAG holds eight EEPs with six coordinators. The composition of the Gibbon TAG has remained stable with the notable exception of the Lar Gibbon EEP Coordinator,

with Lisette de Ruigh of Wildlands Adventure Zoo Emmen being replaced by Job Stumpel, also of Wildlands Adventure Zoo Emmen. Lisette did a fantastic job with this large programme and it was very convenient that she could hand over this official position to Job who had been assisting her with the programme at Emmen.

The TAG met twice in 2015 with the mid-year meeting being held in June at Twycross Zoo, UK. As well as all TAG members being present we were joined by Dr Susan Cheyne, the Director of Gibbon and Felid Research for OuTrop, the Orangutan Tropical Peatland Trust, who informed the TAG about the peatland fires that are sweeping across critical gibbon habitat in Borneo. The IUCN Primate Specialist Group Section on Small Apes was again represented by Florian Magne, who discussed the SSA and its link with the TAG and also updated the TAG on the Huro Project which is centred on rehabilitating Hoolock gibbons.

Scientists from the University of Leicester joined the TAG meeting for one session to discuss the results of a gibbon genome project which was piloted at Twycross Zoo. The results were interesting and are likely to lead to a broader scoped project looking at certain areas of the gibbon genome which could be traced through pedigrees and could potentially be helpful for both population management and identification of species, subspecies and hybrids. Research was also presented from a study based at the University of Liverpool which looked at the use of specific enclosure furniture by zoo-housed siamang gibbons and the results will be included in the accommodation chapter of the Best Practice Guidelines which are currently under construction.



ANOULAK PROJECT © BRICE LEFAUX

The Annual TAG meeting which was held at the EAZA Annual Meeting in September informed members briefly on these topics and also included a nutrition study by Francis Cabana and a presentation of research into hormones and vocalisation by Petra Bolechová. This meeting also saw the presentation of the draft TAG Vision and Mission which were drawn up at the mid-year meeting.

Population Management

The main population management issue the TAG faced in 2013 continued into 2014 and 2015 and that is a lack of space for gibbons. The large Lar and Siamang programmes are in great need, with many surplus juveniles and young adults in need of new homes. The overall problem is further compounded by non-breeding recommendations for some zoos who want to breed in order to have infant animals in their groups. The TAG is very grateful to all the holders who are facing challenging situations with their gibbons and who bring these problems to our attention in good time and work cooperatively with us to find solutions. Unfortunately, for this long-lived group of species, there are no instant solutions so we have to take a medium-long term view to resolve it. All the gibbon coordinators are working very closely together to prioritise space when it becomes available.

Conservation

The TAG's link with the IUCN Primate Specialist Group Section on Small Apes was further reinforced in 2015 with Charlotte Macdonald becoming a member of the IUCN PSG. This relationship included a meeting with the Convener of the SSA, Dr Benjamin Rawson, to discuss potential areas of collaboration. The presence of Florian Magne at all TAG meetings since 2014 is very important and appreciated by the TAG as he provides an excellent bridge between the TAG and the SSA.

Charlotte Macdonald took part in an interview survey which was part of a feasibility study by UN-GRASP to include gibbons under their remit. The Great Ape Survival Partnership is the United Nations' only species-specific programme and is a consortium of over 100 governments, UN agencies, conservation organisations and research institutions that are committed to ensuring the survival of great apes and their habitats. It makes perfect sense to include gibbons within this programme and would help significantly with raising the profile of gibbons and their need for urgent conservation action. We hope to have an outcome on this in 2016-2017.

The TAG continued to support the Cao-Vit gibbon project run by Fauna and Flora International, based in Vietnam, and Project Anoulak, based in Laos, www.conservationlaos.com.

GREAT APE

TAG Chair: Tom de Jongh (Burgers' Zoo The Netherlands)

TAG Vice-chair: Maria Teresa Abelló (Barcelona Zoo, Spain)

Mission: to maintain self-sustaining populations of all the taxa of great ape to subspecific level where possible, and to encourage and promote their conservation in the wild.

The role of zoo populations is primarily to act as ambassadors for educational purposes on the plight of apes in the wild, to further support their conservation in the wild, and as a research resource, the findings of which should be applied to improving their husbandry, welfare and *in situ* conservation. Zoo populations of great apes may also be vital for future reinforcement of wild populations and, therefore, should be managed to preserve maximum genetic diversity.

Currently the TAG covers five managed programmes; all EEPs. The two Orangutan species are being managed separately, but not split to subspecies level, to avoid losing their viability. The Chimpanzee EEP covers all four subspecies and natural as well as unnatural hybrids, including breeding programmes for Western chimpanzees (*Pan troglodytes verus*) and Central chimpanzees (*P. t. troglodytes*), while managing the remaining population to extinction.

TAG Meetings

The Great Ape TAG met twice in 2015. The mid-year meeting took place in Leipzig, hosted by Leipzig Zoo.

Our 2014 Regional Collection Plan, as well as important information on how to avoid difficulties in localising contraceptive implants when wanting to remove these, are among the documents that were posted on the Great Ape TAG webpage of the EAZA website.

At the mid-year meeting it was decided to combine several of the existing documents to a new transfer protocol, also including additional advice and requests that can take advantage of the anaesthesia of an individual ape, such as those for the Ape Heart Project.

During this meeting we discussed how to deal with Great Apes that tested positive for STLTV (Simian T-cell Lymphotropic



BONOBO (*PAN PANISCUS*) © DIETRICH KRANTZ (WUPPERTAL)

Virus). The individual EEPs deal with this in different ways, but is there a good reason for this difference in approach? Conclusions will soon be reflected in the Veterinary Guidelines.

There was also an update on the Ape Heart Project that is being conducted by Twycross Zoo. Cardiovascular diseases (CVD) are a major health problem for great apes. Vicky Strong is doing an in-depth investigation of CVD in great apes in European institutions, including an analysis of post-mortem reports covering the past 10 years.

Dr Josep Call, director of the Wolfgang Köhler Primate Research Center (Pongoland) in Leipzig Zoo gave a presentation about the work conducted and its role in the zoo. The presentation has contributed to mutual understanding between the researchers and the population managers.

The 2015 annual meeting took place in Wrocław during the EAZA Annual Conference.

The annual meeting allows for direct communication with the participants in the different EEPs and is a valuable opportunity to present updates regarding population management, research, conservation and other issues gathered around the year. In addition to the usual updates from the various EEPs, there was

a large variety of presentations on veterinary, conservation and research subjects.

Christina Hvilsom presented an update on the paper on Mountain gorilla genomes, which is of particular interest for the genetic management of small populations.

Research

Vicky Strong and Sharon Redrobe continue their work on the Ape Heart Project, and are producing interesting results (epidemiology, pathology, clinical investigation).

Christina Hvilsom and Tomàs Marquès-Bonet are working on a genetic method to genotype zoo chimpanzees with complex genealogies, in order to assign origin and relatedness beyond generation F2. Furthermore, they are working on a geotagging project, which can help assign correct and very precise geographical origins of confiscated chimpanzees as well as chimpanzees of unknown wild origin, such as chimpanzee EEP founders.

Artificial insemination may be a tool for the future. It would be valuable to adequately store gametes from genetically unrepresented old animals in the population. Both the Bonobo EEP and Chimpanzee EEP are considering the possibility of AI for Great Apes. The Bonobo EEP is planning to collect the sperm from two wild caught old bonobos before they die. The research group will develop a protocol on how to collect samples. The species coordinators will inform the holders of selected individuals to try and collect sperm and store this, as described in the protocol.

Conservation

Regarding conservation the following issues were reviewed:

GRASP – Renewed website, now also targeted at the general public: www.un-grasp.org

IUCN – Building bridges: some TAG members are also members of the Section Great Apes of the IUCN Primate Specialist Group. In order to improve the cooperation with the IUCN, the TAG will also invite a representative from the Section Great Apes to become a member of our TAG.

EAZA Ape Conservation Fund – Funds have been given to Tacugama sanctuary in Sierra Leone to help them overcome the effects of the Ebola outbreak. The remaining money has been labelled for emergency funding.

Publications

- Xue, Y. *et al.* (2015). Mountain gorilla genomes reveal the impact of long-term population decline and inbreeding. *Science* 348: 242-245



EUROPEAN SOUSLIK, © PERE IGOR CC

SMALL MAMMAL

TAG Chair: Jutta Heuer (Zoologischer Garten Halle, Germany)

TAG Vice-chair: Klaus Rudloff (Tierpark Berlin-Friedrichsfelde, Germany) and Sandra Honigs (Aquazoo Düsseldorf, Germany)

In 2015, the Small Mammal TAG mid-year meeting took place in Biotropica/Val de Reuil, and CERZA, France. The TAG members gave very interesting presentations on different small mammal species, reported on the development of the EEP/ESB programmes and updated the participants on relevant conservation projects. The topics of the presentations varied from the hand rearing of prehensile-tailed porcupines (Kerzers), small rodents in EAZA collections and the link to the current RCP (Plzeň), zoonotic potential of Variegated squirrels (Magdeburg) up to mixed species exhibits at the Leningrad Zoo (Saint Petersburg). All presentations will be published on the Small Mammal TAG web space once the construction of the new member area is finished.

In addition to the presentations, a workshop session on updating the RCP was held. Because the Small Mammal TAG represents 75% of all mammals with more than 4000 species, the TAG developed a 'positive list' of species, which should be kept and managed within the TAG at present and in future. A scoring system for the RCP was already developed in 2014. During the meeting the TAG took the opportunity to discuss more details and to produce the TAG mission statement and objectives. There were fruitful and important discussions about the future structure of the TAG. It was decided to find

responsible persons for the different taxa subgroups to bring more power in to the management of the high number of species overseen by the TAG.

On the *in situ* conservation front, the TAG supports the Pakarana project in Bogota (Colombia), the Pangolin project in Vietnam and other projects for Giant Anteaters (*Myrmecophaga tridactyla*), Silky anteater (*Cyclopes didactylus*), Pygmy sloths (*Bradypus pygmaeus*), Northern Three-banded armadillo (*Tolypeutes tricinctus*), Giant armadillo (*Priodontes maximus*), Balkan Snow Vole (*Dinaromys bogdanovi*), European Souslik (*Spermophilus citellus*) and Laotian rock rat (*Laonastes aenigmamus*).

Conservation project highlight: Laotian rock rat (*Laonastes aenigmamus*)

The Laotian rock rat was described as independent species in 2005 and is listed by IUCN as endangered. The decrease of the wild population and the uniqueness of this rodent resulted in 2014/2015 that TAG members started to explore further actions to save the species. Some members of the TAG therefore went to Laos for a first visit of the habitat of the species and to gain a better impression of the current situation. There is little information about this species available so far, but the TAG is currently exploring the possibilities of importing the species to European institutions.

Another important thing to highlight is the TAGs awareness of the Pangolin crisis. The TAG is obviously gravely concerned about the large scale illegal trade of pangolins and working towards developing a TAG position and approach on how best to contribute to help tackling the problem.

CANID AND HYAENID

TAG Chair: Raymond van der Meer (DierenPark Amersfoort, The Netherlands)

TAG Vice-chairs: Heike Maisch (Erfurt Zoo, Germany); Simon Marsh (Yorkshire Wildlife Park, United Kingdom)

Mission

- Coordinating and encouraging participation in *in situ* conservation activities.
- Establishing priorities considering conservation, research and education with species coming under the remit of the



SPOTTED HYENA HUSBANDRY WORKSHOP 2015 © RAYMOND VAN DER MEER

TAG.

- Striving for the highest standards in welfare and professional management for species coming under the remit of the TAG.
- Promoting cooperation between EAZA members and other organisations with similar goals

TAG Meetings 2015

On the 16 and 17 January 2015 DierenPark Amersfoort hosted the first spotted hyena (*Crocuta crocuta*) husbandry workshop. Over 20 delegates attend the two-day workshop with the aim to gain knowledge, share experiences and discuss the issues relating to spotted hyena husbandry. There were several presentations on *ex situ* management, *in situ* conservation and the biology and ecology of spotted hyena. The workshops were designed to bring together *in situ* knowledge and help apply it to *ex situ* management. The key points to come out of the workshop were: produce an aggression intervention protocol, start research on hormone levels, olfactory research with a view to assisting introductions, share information to other holders and produce a Best Practice document. General feedback on the workshop was good and it was felt that another workshop in 2017 would be beneficial.

Update on breeding programmes 2015

Cyrintha Barwise Joubert from the Breeding Centre for Endangered Arabian Wildlife collated data on the wolf (*Canis lupus*) population held throughout EAZA institutions. The data was collected in May 2015 from ZIMS. The analysis was carried out to identify which subspecies are held and the population of each. This is with a view to identify the numbers

of European wolf (*Canis lupus lupus*) and to work towards a higher level of breeding programme management. The results showed that 128 EAZA facilities hold 682 individual animals categorised into 15 subspecies or as *Canis lupus*. 32 EAZA facilities hold 113 animals classified as *Canis lupus*. 50 EAZA facilities hold 225 animals classified as *Canis lupus lupus*. The majority of the EAZA facilities have not bred with only 5% (11 facilities/5 subspecies) of EAZA facilities breeding 40 pups and only 5 pups were classified as *Canis lupus lupus*. 12 EAZA facilities hold just one individual of subspecies. Now we have identified the potential European wolf population we can look at a genetic analysis of those individuals. All this data will feed into and help shape the Regional Collection Plan review and how we manage *Canis lupus lupus* and the other subspecies held throughout EAZA.

In 2015 the TAG carried out the African wild dog (*Lycaon pictus*) EEP evaluation. There was a good response from the breeding programme participants and the species committee and generally positive comments were made on the way the programme is run. The scoring ranged from good to sufficient with an overall final score of sufficient. Points to improve on were: involve the species committee more and seek their advice on current issues, produce the annual report in a timely manner and work towards updating the existing Husbandry Guidelines in to the new Best Practices format. We also had the TAG evaluation which scored the work of the Canid and Hyaenid TAG in between good and sufficient. Areas we need to improve on are: assisting the programme coordinators in producing Best Practice documents, update the Regional Collection Plan, strengthen links with the IUCN Specialist Groups, review TAG membership and bring in more expert advisors.

Conservation

The TAG's *in situ* Conservation Initiative has been gaining momentum over 2015 with more *in situ* projects identified. We are still to find suitable projects to link to the TAG and the breeding programmes for the following species: Dhole (*Cuon alpinus*), European wolf (*Canis lupus lupus*) and Striped hyena (*Hyaena hyaena*). Once we have a final list of *in situ* conservation projects we will start to promote them throughout EAZA members and to a wide audience. The new EAZA Canid and Hyaenid TAG logo will help with branding and promotion of TAG endorsed activities.

BEAR

TAG Chair: José Kok (Ouwehands Dierenpark, The Netherlands)

TAG Vice-chair: Lydia Kolter (Kölner Zoo, Germany)

Bear TAG mid-year meeting, 4-6 June Warsaw Zoo

The mid-year meeting 2015 was kindly hosted by Warsaw Zoo.

Amongst the 'regular' matters like status of the EEPs and ESBs we were in a position to actively start to revise the assignment of roles for keeping ursid species in European zoos. These roles will be relevant for the revision of the RCP and assignment of regional population sizes per recommended species.

Revision of the Ursid Husbandry Guidelines was on the agenda as well. Necessary updates we discussed hand in hand with the EAZA Best Practise Guidelines document. Gaps were defined to be supplemented at a later stage.

It was stipulated by the TAG Chairs that regular communication about Bear (TAG) matters could be very useful. In general challenges the different programs face could be discussed with regard to conservation issues, but a letter as such could also be useful for showcasing bear species when in need of new holders in general or in finding places for individual bears that urgently need to be replaced for the sake of the programme specifically. The TAG decided positively about this and a preferably native English writer will be sought.

In general the future role and organisation of the Bear TAG was discussed. The first outline of the planned joint bear tag meeting with Polar Bears International in Spring 2016 was stipulated.

Finally the TAG commented on the reconstruction plans for the polar bear enclosure in Berlin Tierpark and on the plans for a completely new enclosure at Noah's Ark, a non-EAZA member, which is willing to take surplus males.

EAZA Annual Conference 2015, Wrocław

The Pole to Pole Campaign was officially closed during one of the plenary sessions. A record number of zoos and aquaria, 263, participated in the campaign. Collection of the Petitions '2 Degrees is the Limit' continued. These were handed over during the United Nations Framework Convention on Climate Change (UNFCCC) in Paris.

New members could be announced during this meeting: Marcel Alaze from Leipzig Zoo took up the responsibility for the Sloth Bear EEP and Julie Mansell from Belfast is the freshly appointed Bear Tag Newsletter Representative. A warm welcome to both!

An overview on the development, problems and conservation activities of the different programs for Asiatic Black bear, Sun bear, Sloth bear, Spectacled bear, Polar bear and Brown bear was provided by the different coordinators. The survey of the American Black bear population within EAZA was presented by Cécile Dubois (Peaugres).

Lydia Kolter reported on the IUCN SSC Captive Bear Expert team meeting in Greece in October 2014 where Kolter and Kok contributed to the session of the Bear Specialist Group (BSG) under the heading "Captive bears for conservation". It was a joint presentation of members of the captive bear expert team of the BSG, which is chaired by Lydia Kolter. It consists of regional representatives of experts from zoos and rehab facilities from different continents. José Kok featured the conservation activities of Alertis based on the bears at the Rhenen bear forest. Lydia Kolter gave an overview on conservation education and fund raising efforts of EAZA zoos keeping brown bears and spectacled bears.

First ideas on future roles of *ex situ* bear populations in Europe were introduced by José Kok.

Evaluation of the Spectacled bear EEP and health issues of the species

The evaluation was finished in spring 2015 and it was rated as good by all parties. It was stated by the EEP Committee that finding new holders is a key issue. It was suggested to search for new participants by means additional to the annual conferences. For this species and its needs too, the bear newsletter will be a forum.



SPECTACLED BEAR (*TREMARCTOS ORNATUS*) © ENZO FRANCHINI, ZOO ZURICH

In January 2015 members of the working group dealing with skin problems in spectacled bears met to update colleagues from the different disciplines on the results of current studies and to determine next steps. In order to spread the information it was decided to launch several publications and to inform a broader audience. A talk as well as posters on the issue had been presented by members of the working group during the conference of the American zoo veterinarians as well as during the conference of the European zoo veterinarians. An overview article on the prevalence in the European population, the symptoms, current knowledge on systems affected as well as treatment of the alopecia symptoms was submitted to EAZA Newsletter *Zooquaria* (published in March 2016). A detailed publication on the treatment is in preparation and will be submitted to a peer-reviewed veterinary journal.

SMALL CARNIVORE

TAG Chair: Aude Haelewyn-Desmoulins (Parc ZOO du Reynou, France)

TAG Vice-chair: Allan Galway (Belfast Zoological Gardens, United Kingdom)

The Small Carnivore TAG has 24 members, made up of seven EEP Coordinators, four ESB keepers, five species monitors, four general advisors, one IUCN scientific advisor and one veterinary advisor.

TAG meetings

The TAG held two meetings in 2015. The mid-year meeting was held in Parc ZOO du Reynou in France. Along with programme updates the TAG finalised the RCP outcomes for every small carnivore species leading to the future creation

of new monitoring programmes and the recommended upgrading of the binturong (*Arctictis binturong*) ESB to an EEP and the creation of new ESBs for bokiboky (*Mungotictis decemlineata*), ring-tailed vontsira (*Galidia elegans*) and Cusimanse (*Crossarchus obscurus*).

Priority species for increased conservation were discussed with advice from the TAG's scientific advisor Will Duckworth. It is thought that it may be best to focus on hotspots: Europe, Southeast Asia and Madagascar. The TAG should focus its attention to the European mink (*Mustela lutreola*) as it is critically endangered and found in our region. The Owston's civet (*Chrotogale owstoni*) should also take a high priority as it faces serious decline in its wild population. The TAG would like to increase focus and develop programmes for Southeast Asian otters and endangered Madagascan carnivore species. Increased global zoo collaboration with these and other species would be of great benefit.

The Small Carnivore TAG meeting at the EAZA Annual Conference in Wrocław concentrated on trying to promote new holders for European mink, Owston's civet, giant otter (*Pteronura brasiliensis*) and fossa (*Cryptoprocta ferox*), four species which are of high conservation importance but are struggling for space in zoos. Angela Glatston the GSMP coordinator for red panda gave an extremely interesting



BOKIBOKY (*MUNGOTICTIS DECEMLINEATA*) © ALLAN GALWAY

update on the Red Panda Network.

Allan Galway the TAG Vice-chair attended the International conference for small carnivore conservation and reintroduction at Taipei Zoo in Taiwan. The meeting brought together zoo professionals and field biologists from three European and seven Southeast Asian countries. Allan spoke on the role of EAZA SCTAG and the importance of developing a Regional Collection Plan.

Elodie Rey the European otter (*Lutra lutra*) EEP coordinator was invited to attend a two day otter conference at Aquamarine Fukushima in Japan. The JAZA JSMP for Eurasian otter is suffering problems with inbreeding and benefited from Elodie's advice and guidance. Future cooperation with the EEP may be needed to improve this situation. Although common in Europe the Japanese subspecies *L.l.whiteleyi* was declared extinct over thirty years ago.

Programme updates

As well as the aforementioned future upgrading of several programmes, the finalising of the latest RCP has created a number of new monitoring programmes. The TAG would like to introduce Peggy Rüegg-van den Broek from Papiliorama in Switzerland who will now be monitoring tayra (*Eira barbara*), from Zoo Schwerin in Germany Jochen Lengger will monitor honey badger (*Mellivora capensis*) and Sabrina Höft will monitor the small spotted genet (*Genetta genetta*) and finally Jason Palmer from the New Forest Wildlife Park in the United Kingdom will be taking on the unenviable task of monitoring Asian short-clawed otter (*Aonyx cinerea*).

The Giant otter EEP was transferred from Frank Brandstätter at Zoo Dortmund to Tim Schikora the director of Schwerin Zoo, Germany. Tim is busy with the process of creating a GSMP for the species and organising the transfer of individuals between EAZA and AZA. The TAG would like to thank Frank along with Warner Jens (Apenheul) and Bernard Holdijk (former Zodiac zoos) who also stepped down from monitoring the white-nosed coati (*Nasua narica*) and yellow mongoose (*Cynictis pencilata*) respectively for all their hard work and dedication over the years.

The Owston's civet EEP celebrated the birth of twins born at Newquay zoo. These animals are particularly important as they are the result of their father being newly imported from Vietnam last year. Newquay Zoo has also trialled exhibiting the species in an enclosure in their nocturnal house, this has been found to be very successful so far.

The red panda (*Ailurus fulgens*) was reclassified by IUCN from vulnerable to endangered. The EEP has been extremely

busy. Best Practice Guidelines and a long-term management plan have been implemented.

Conservation and Research

The Binturong ESB has started an important genetic study to try and ascertain the subspecies of its population. The coordinator also reports the creation on a new initiative of 'World Binturong day' with a great success in 2015. It will be held on the second Saturday of May each year and we hope you will celebrate it too.

The Red panda EEP is supporting important research which is being carried out by Jürgen Schmitz in sequencing a significant part of the red panda genome using the PacBio © technology and subsequently intends to analyse and compare the locations of jumping genes that will hopefully correct the red panda position to the tree of *Musteloidea*.

The European otter EEP is split into A-line (known origin) and B-line (unknown origin) specimens. A genetic study has been started to ascertain whether the B-line otters are indeed also pure and can be included in the breeding population.

An important study on infanticide in mongooses is being carried out by Dr Kathy Baker from Newquay Zoo and Guillaume Douay the TAG Veterinary advisor is studying PKD in red pandas.

TAG developments

The Small carnivore TAG was evaluated in 2015. As a result the new Chair, new Vice-chair and other TAG members have a number of important tasks to try and improve and streamline the performance of the TAG. A communication plan has been developed to place the TAG at the forefront of global small carnivore conservation this includes an exciting new TAG logo, branding, newsletter and SCTAG Facebook page. Future projects will include finalising the newest RCP, implementing space surveys and creating new *in situ* conservation projects for high priority species.

The TAG successfully evaluated the EEPs for European otter, giant otter, fossa and European mink.



PRESENTATION AT WROCLAW © A. SLIWA

FELID TAG

TAG Chair: Alexander Sliwa (Kölner Zoo, Cologne, Germany)

TAG Vice-chairs: André Stadler (Wuppertal Zoo, Germany) and Grégory Breton (Le Parc des Félines, France)

Felids are charismatic animals and almost every zoo displays at least one species of big cat species. However less and less zoos display small cat species. Despite this, many felid programmes have been established in our regions. In 2015, there are 19 EEPs, 5 ESBs; 9 (sub)species are monitored by Monitoring-Persons. The Felid TAG has the mission to overview the functioning of these programmes and to choose the strategy for the future years.

In 2015 the EAZA Felid TAG held their mid-year meeting at Attica Zoo, Athens, Greece; and held two sessions during the EAZA Annual Conference in Wrocław. During the latter meeting there were several closed meetings of Species Committees for several species' EEPs. Chairs attended various conferences; we were invited, for example, to present during the Large Carnivore rehabilitation and reintroduction workshop in Moscow, Russia, in November about our structures and programmes within EAZA. At the same time there were discussions and negotiations at the Ministry of Natural Resources in Moscow, in conjunction with the IUCN

Cat SG, about the breeding and reintroduction of Persian leopards (*Panthera pardus saxicolor*) stemming from the EEP into the Russian Caucasus Mountains. At the same time there were similar negotiations about the reintroduction of the amur leopards (*Panthera pardus orientalis*), using animals from the EEP for breeding in the Russian Far East.

During 2015 the following programmes were evaluated: Margay (*Leopardus wiedii*), Black-footed cat (*Felis nigripes*), Sand cat (*Felis margarita*), Geoffroy's cat (*Leopardus geoffroyi*), Southern cheetah (*Acinonyx jubatus jubatus*), Sri Lankan leopard (*Panthera pardus kotiya*) EEPs. The Felid TAG was evaluated by the EEP Committee subgroup with the functioning of the TAG rated from good to sufficient. One of the serious shortcomings was that the RCP has not been finished. There has been a vacancy for a new coordinator for the Geoffroy's cat EEP, and although there were several suitable candidates, the final decision was only taken in March 2016. The Persian leopard EEP breeding and addition of new holders has been substantially increased to help and supply the reintroduction programme in the Russian Caucasus Mountains. Another important achievement has been the exchange of Persian leopards with the Sochi Breeding Center for Reintroduction, Russia, and the arrival of a so far unrepresented male to Parc des Félines, Nesles, France.

The Felid TAG has produced a statement and continued to update EAZA members of the non-recommended keeping

and breeding of hybrid tigers and particularly white tigers. At the same time there have been exploratory discussions on how to allow more frequent breeding of tigers of the existing two tiger breeding programmes, whilst controlling the number of cubs in litters, euthanising old individuals or even litters. There have been continued efforts to support and be involved in research regarding the origin and future goals for African lions within EAZA collections.

Several EEPs for medium and larger-sized felids, like the Southern cheetah, clouded leopard (*Neofelis nebulosi*) and snow leopards (*Uncia uncia*) experienced problems with holders sending out to and receiving individuals from non-EAZA institutions with consecutive trade (selling cats for high prices). These have been very difficult to mitigate, by letters and phone calls on the issues. These infringements have to be taken seriously in future with stringent actions taken against EAZA members involved in these unauthorised dealings.

All the above activities shape the goals and functions of the Felid TAG in the past and for the future.

The TAG chair, Dr Alexander Sliwa, has been actively involved in long-term *in situ* work on black-footed cats in South Africa and together with the TAG vice chair Grégory Breton, he has initiated *in situ* work on sand cat in southern Morocco in a partnership between Rabat Zoo, Parc des Félines and sponsored by several EAZA members and NGOs specialising on felids. André Stadler has updated the EAZA *in situ* projects list on Felids. Alex Sliwa is the lead assessor for both black-footed cats and sand cats for the IUCN Redlist assessment. Further he serves since 1995 as invited member, as specialist for several species *in situ* as well advises the IUCN Cat SG co-chairs on many *ex situ* felid issues and as a specialist for the identification of particularly the smaller and less known species worldwide.

MARINE MAMMAL

TAG Chair: Gerard Meijer (Ouwehands Dierenpark, The Netherlands)

TAG Vice-chair: Claudia Gili (Acquario di Genova, Italy)

The EAZA Marine Mammal TAG oversees the running of two EEPs (for bottle-nosed dolphin (*Tursiops truncatus*) and Caribbean manatee (*Trichechus manatus*)) and four ESBs (for Patagonian (*Otaria flavescens*) and Californian (*Zalophus californianus*) sea lions, South American fur seals (*Arctocephalus australis*) and grey seals (*Halichoerus grypus*)).

In 2015 the TAG met twice, during the EAZA Annual Conference in Wrocław and at the mid-year Marine Mammal TAG meeting in Kolmården.

The appointed group working on the compilation of the EAZA Best Practice Guidelines for Pinnipeds made good progress but did not reach the aim of finalising the final draft. The planned meeting in 2015 was postponed.

The TAG now aims to finalize the final draft in spring 2016.

- The Best Practice Guidelines for the walrus will be reviewed once more and the final draft will be ready in 2016.
- The first draft of the Best Practice Guidelines for manatees is ready but there is still work to be done on the final draft.
- It is agreed to develop Best Practice Guidelines for Bottle-nosed dolphins and the aim is to finalise the draft at the 2016 mid-year meeting.
- A masterplan meeting for the Bottle-nosed dolphin is planned in 2016.

The Regional Collection Plan of the Marine Mammal TAG got reviewed in 2013. A survey was carried out in 2014 to determine current and future space availability in EAZA members for marine mammals. The results were discussed during the mid-year meeting in 2014 in Amsterdam and should have been finalised in 2015.

The finalising meeting was postponed and a new meeting will be planned in 2016.

The TAG would like to continue the MoU between EAZA and EAAM, and thus for it to be renewed. The TAG strongly feels that a MoU is of importance for functioning of the breeding programmes. A letter with positive advice has been sent to the EEP Committee.



WEST INDIAN MANATEE (*TRICHECHUS MANATUS*)

ELEPHANT

TAG Chair: David Field (ZSL London Zoo, United Kingdom)

TAG Vice-chair: Thomas Kauffels (Opel-Zoo, Germany)

TAG Mission

African and Asian elephants are flagship species in our zoos; principally their role is in education and raising conservation awareness.

The TAG seeks to establish self-sustaining and genetically diverse populations of elephants in EAZA zoos, promotes excellence in all aspects of management and welfare of these iconic animals and develops the knowledge of elephant care professionals.

The TAG will maximise the conservation support and research from zoos to elephant conservation.

2015 TAG Meetings

A productive mid-year meeting was held at Pairi Daiza (Cambrom-Casteau, Belgium) where a number of new protocols were introduced and later endorsed at the Wrocław 2015 EAZA Annual Conference closed TAG meeting. These include:

- Approved “Definition of Contact”;
- Updated TAG Mission Statement;
- TB Testing recommendation;
- Draft proposal for the justification for import of wild-caught elephants;

The veterinary advisors meeting took place at the start of the year. Major outcomes of this meeting included continued development of the “TB testing recommendation” and further exploration into treatment protocols for EEHV and Elephant pox. A successful International Elephant Management Academy focusing on protected contact elephant training took place at Zoo Vienna in December with another planned for January 2016.

Programme Coordination

Communication within the TAG has improved; the decision list continues to be updated and memory sticks containing all TAG protocols, husbandry guidelines and recent research articles were distributed at Wrocław to all TAG members. The TAG website reflects these protocols and updated minutes. Husbandry Guidelines will be reviewed in 2016, a subcommittee has been established to lead on this. EEP evaluations took place this year and TAG evaluation is

scheduled for 2016.

The research subgroup within the TAG reviews the many projects presented to the TAG for support and endorsement.

Update on breeding programmes

The Asian elephant EEP continues to progress in line with 2013 Strategic Masterplan objectives. Tragically three calves were lost to EEHV in 2015. All young male bulls have recommendations for transfer to bachelor herds when appropriate. The TAG is supporting the EEP to ensure all institutions holding breeding females also provide bull facilities.

The African elephant EEP has fundamental problems with a lack of breeding females. Recommendations have been made to for all eligible African females to urgently move into appropriate breeding situations if they are currently not e.g. no access to a bull. Sadly this may be too late for a number of females. The situation at one EEP member in particular remains unresolved with three cycling females without access to a bull and no suitable bull facility planned. This situation has been referred to EEP Committee for advice. The EEP Committee endorses the recommendation of the TAG and the three animals must remain together and immediately move into a breeding facility. The institution has been offered exhibit animals to replace these three potentially breeding females.

Credit is given to the coordinators and studbook keepers of the two EEPs for their continued dedication and hard work.

Research

A major focus of the year has been collecting funds for the TAG EEHV Research Fund; a total of € 27,000 has been



AFRICAN ELEPHANT (*LOXODONTA AFRICANA*) SUCCESS AT VIENNA ZOO © SABINE FRUEHWIRTH

raised through contributions from 43 collections (out of 108 holders). All holding collections have been asked to contribute € 1,000 per year for three years. The fund continues to support three key identified projects:

1. New approach to understand natural immunity in Asian elephants against fatal Elephant Endotheliotropic Herpes Virus (EEHV) infection
PhD Supervisor: Professor Thomas B. Hildebrandt, Head of Reproduction Management at the Leibniz Institute for Zoo & Wildlife Research (IZW).
2. Development of a serological test and vaccine for EEHV
PhD supervisor: Byron Martina PhD Erasmus University Rotterdam – Department of Virology
3. Working towards a better understanding of epidemiology of Elephant Endotheliotropic Herpesviruses (EEHVs)
Arbar Dastjerdi - Animal Health and Plant Agency (AHPA) Mammalian Virus Investigation Unit (MVIU).

Conservation

Links continue to be built with IUCN SSC African and Asian Elephant Specialist groups; the African elephant Specialist Group is especially important in light of ongoing discussions in relation to the long-term viability of the African elephant EEP population. Making considerable long-term contributions to conservation is important to achieve the aims of the EEP and the TAG will assist with building these links. Some excellent field conservation projects tailored to Asian elephants are being supported by a few zoos e.g. Zurich Zoo and Chester Zoo.

EQUID

TAG Chair: Ulrike Rademacher (Wilhelma Zoo, Germany)

TAG Vice-chairs: Tanya Langenhorst (Marwell Wildlife, United Kingdom); Jaroslav Šimek (Prague Zoo, Czech Republic)

TAG meetings 2015

The Equid TAG met during EAZA Conference in Wrocław, Poland. Aside from the general updates on all breeding programmes and conservation work, the main focus was on the issue of Equine Herpes Virus (EHV). The TAG had invited Dr Alex Greenwood from the IZW, Berlin, who is investigating this disease in a variety of EAZA-held equids.

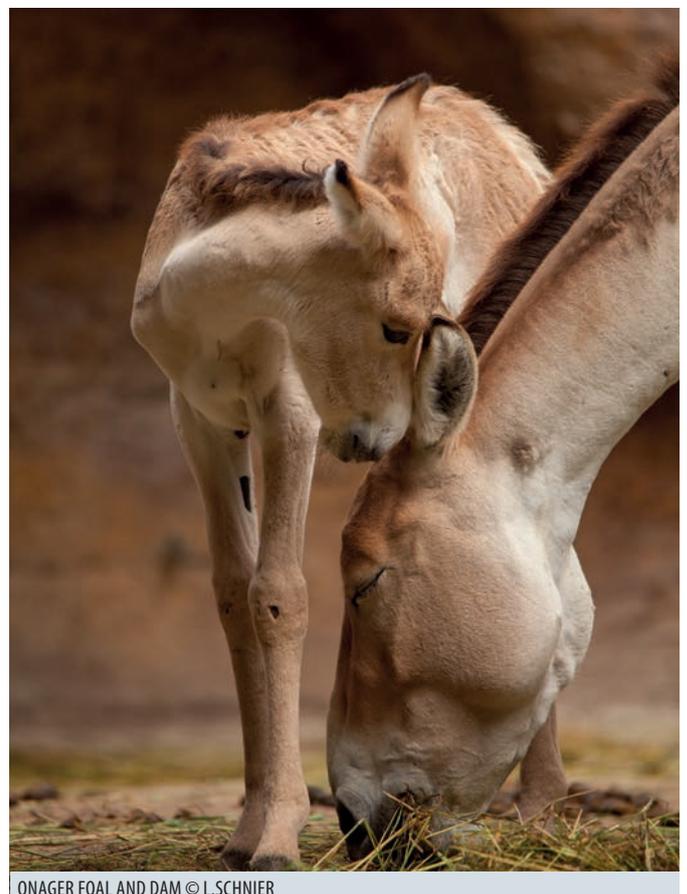
The main outcome of this so far is that EHV appears to be widely spread amongst the EAZA institutions and should not form a barrier to transfer recommendations issued by the EEPs. Research in this field was highlighted in the TAG 2013/14 report and is ongoing. All institutions are requested to submit samples to the IZW whenever the opportunity arises (following the Sampling Protocol available on the EAZA website).

TAG statement:

As a follow up of this meeting the Equid TAG issued a position statement, that EHV is no reason to cancel or reject recommendations. The statement is available on the EAZA member area.

TAG surveys:

A survey on sarcoids in African equids was conducted in 2015 showing a prevalence in Hartmann's mountain zebra (*Equus zebra hartmannae*) and Somali wild ass (*Equus africanus somaliensis*). Initial results were shown in a poster at the EAZA Conference. Analysis has been carried out since and a detailed report on this is expected for 2016/17.



ONAGER FOAL AND DAM © L.SCHNIER

Best Practice Guidelines:

The TAG has assigned different chapters of the guidelines to different members of the TAG to be updated. Progress on this will be reviewed regularly.

EEP developments in 2015:

The Grevy's zebra (*Equus grevyi*) EEP was evaluated and the programme was rated as Good. It was recommended to provide updates for the available Husbandry Guidelines for African equids and work towards publishing them as Best Practice Guidelines, which will happen as part of the TAG's currently ongoing review of the African Equid Best Practice Guidelines.

Evaluation of the Przewalski's horse (*Equus ferus przewalskii*) EEP has also begun in 2015 and final results are expected in 2016.

Apart from the Grevy's zebra EEP all equid EEPs are in need of and would welcome new holders.

Conservation involvement:

Several equid EEPs are heavily involved with field conservation projects.

The Grevy's zebra EEP continues its long-standing involvement in several Grevy's zebra field projects in Kenya with support from EEP institutions.

The Persian onager (*Equus hemionus onager*) EEP reported on a new breeding facility in Iran that will benefit the species there.

The Przewalski's horse EEP and Prague Zoo continue with their work of reintroductions of the species into western Mongolia which is supported by EEP institutions financially and in kind.

The Somali wild ass EEP is cooperating with conservation in the field in Ethiopia and Eritrea.

RHINO

TAG Chair: Friederike von Houwald (Zoo Basel, Switzerland)

TAG Vice-chair: Lars Versteegen (Safaripark Beekse Bergen, The Netherlands)

The vision and mission of the EAZA Rhinoceros TAG is to have a healthy, viable population of free-ranging and intensively managed rhinos ranging through intact ecosystems, where they are valued and cherished both locally and globally to ensure all rhino EEP populations are healthy, self-sustaining and genetically viable and are capable of being

an effective tool in support of rhino conservation in the wild.

TAG meetings

In 2014, the EAZA Rhinoceros TAG met at the EAZA Annual Conference in Budapest and in 2015 at the EAZA Annual Conference in Wrocław. A major aim is to continue to strengthen links with the *in situ* partners to tackle the huge poaching problems throughout the year. For the Rhino TAG meeting in Budapest, Dirk Swart, Section Ranger Hluhluwe Imfolozi Prak, Ezemvelo KwaZulu Natal Parks from South Africa was invited. He spoke about the use of horses to patrol the huge areas of the Hluhluwe Park and informed the audience about the daily hard work to combat poaching of rhinos in this area. In 2015, Sam Taylor, Chief Conservation Officer from the Borana Conservancy, Kenya, was invited to speak about the use of tracker and attack dogs in the battle against rhino poaching. Both speakers were invited on behalf of Save the Rhino International (SRI), with whom the Rhino TAG works in close cooperation regarding rhino conservation projects.

According to the latest news from the IUCN African Rhino Specialist Group (meeting in KNP; South Africa, February 2016), the number of African rhinos killed by poachers has increased for the sixth year in a row. At least 1338 rhinos were killed by poachers across Africa in 2015. This is the highest level since the current crisis began to emerge in 2008. Since then, poachers have killed at least 5940 rhinos.

The continued poaching has impacted on rhino numbers. According to the IUCN AfRSG numbers of the more numerous White rhino (*Ceratotherium simum*) appear to have levelled off on the continent with 2015 numbers estimated between 19.682 and 21.077. The Black rhino (*Diceros bicornis*) numbers for 2015 are estimated at between 5.042 and 5.455. Despite the fact that the latter species shows a +2.9% per annum increase, poaching has however reduced growth in black rhino numbers below the usual +5% per annum target growth rate. The same applies to the White rhino population.

Despite those alarming numbers, increased law enforcement effort and expenditure in recent years have coincided with a slowing down in the rate of increase of poaching continentally from 2013 – 2015. Over the last two years, poaching has declined in Kenya and for the first time since 2008 the number of rhinos poached in the major range state, South Africa, fell slightly last year (including Kruger National Park).

Many EAZA rhino-holding facilities already support rhino conservation projects. This is highly appreciated and needed by the people who are working in the field and whose



RHINO EVENT

commitment – often at tremendous costs to themselves and their families – is 100% for rhino protection. It would make even a bigger difference if more rhino-holding zoos would contribute to rhino conservation projects.

In June 2015, the International Rhino Keeper Association (IRKA) Conference was kindly hosted by Chester Zoo. The conference was very well-attended and allowed the exchange of diverse experiences in the management of all three species in human care.

The status of the three EEPs within the Rhinoceros TAG are as follows:

Black rhino EEP (*Diceros bicornis michaeli*):

At the beginning and end of 2015 there were 33.49 (82) Black rhino (*Diceros bicornis michaeli* and *D. b. minor*) held within 21 EAZA institutions.

Of those mentioned, only one pair (1.1) of *Diceros bicornis minor* is kept in EAZA at Frankfurt Zoo.

During 2015 there were 4.2 births (0.1 Chester, Dvur 1.1, Ebeltoft 1.0, Howlett 1.0, Magdeburg 1,0).

There were 1.3 deaths.

Two new holders participating in the EEP.

There were a total of 5.4. transfers over the year.

2.4 transfers took part within EAZA ,

2.4 transfer took part out of EAZA,

0.2 transfers to Japan.

The first analysis of the ISB was performed.

Indian rhino EEP (*Rhinoceros unicornis*)

69 (35.34) Indian rhinos are kept in 27 EAZA zoos.

In 2015, 3.1 births occurred: Berlin TP (1.0), Munich (1.0), Plankendael (0.1) and Whipsnade (1.0). All young survived, the male at Munich is a great addition to the EEP as he is the offspring of a potential founder.

1.1 animals died and 4.2 transfers took place.

The Indian rhino EEP is increasing, but it is becoming more and more difficult to find holders, who not only send appropriate plans in time, but also build the facilities in time. It is vital for the Indian rhino EEP to find new holders that reliably build their exhibits within two to three years of contacting the EEP.

The EAZA Best Practice Guidelines for Greater one-horned rhinos have been finished and are available on the EAZA public website.

White rhino EEP (*Ceratotherium simum*)

The White rhino EEP population started with 260 (101.159) animals in 71 zoos.

Births: 4.4 of which 3.4 survived.

Deaths: 1.3 + 1.0 calf that did not survive. Majority are old animals with the exception of 1 female that died because of veterinary complications.

Transfers: 3.5

Imports: None

14 zoos are reported to participate in White rhino conservation projects, but it is known that more zoos donate money to the large Rhino conservation organisations Save the Rhino International and International Rhino Foundation.

The White rhino EEP had their annual meeting during the EAZA Conference in which the focus lay upon veterinary issues and conservation. Both subjects are playing a crucial role in this EEP. The population in the EEP is slowly growing. More calves are born, and more important, more females start reproducing. The EEP feels that with the initiative to exchange animals which are not breeding and by exchanging young females out of their maternal herd a big step has been taken to increase the population growth. Only because the large percentage of old “import” animals from the 1970s are now slowly dying out, the population is not yet sustainable, but with the potential and the development it seems this will only be a matter of time. The EEP population grew up to 262 animals (102.160) during 2013. And even more exciting, eleven animals have been reported to give birth in 2014!

TAPIR AND SUIFORM

TAG Chair: Bengt Holst (Copenhagen Zoo, Denmark)

TAG Vice-chair: Jochen Reiter (Duisburg Zoo, Germany)

In 2014 it was decided to merge the two former TAGs, the Tapir and Hippo TAG and the Pigs and Peccary TAG into one TAG, now called the Tapir and Suiform TAG. In order to reflect the various taxa included in the new TAG it was decided to use the term “Suiform”, representing the Pigs and Peccaries as well as the Hippos and Pygmy hippos, and then just add the only remaining taxon, the Tapirs to the name. It thus doesn’t indicate any prioritisation of species, only idiomatic concerns.

General activities:

The Tapir and Suiform TAG met once during the report period, on 17 September 2015 in Wrocław. The main topics

discussed during the meeting were the structure of the new TAG and of who is doing what. The TAG has two subgroups – one for the former Tapir and Hippo TAG species and one for the former Pigs and Peccary species. Both groups are characterised by their close links to their respective IUCN SSC Specialist Groups which was also reflected in the agenda of the meeting. In addition to short reports from all programmes in the TAG there were a number of presentations focusing on the situation in the field. Roland Wirth (Zoological Society for the Conservation of Species and Populations, Germany) gave an update on wild pig conservation in Asia, Kristin Leus CBSG updated the TAG on news from the IUCN SSC Wild Pig Specialist Group and gave on behalf of James Burton an update on “Action Indonesia”. The chairman gave an update on “the fifth species of tapir” that is still not officially approved as a new species, and Frédéric Housaye gave a presentation about the World Tapir Day at CERZA, France.

Based on the critical situation for the Chacoan Peccary in the wild and the promising breeding results in Europe since the species was reintroduced into European zoos for conservation purposes in 2012 it was proposed to establish an EEP for the species. The proposal was approved by the EEP Committee in April 2015 with Christian Kern from Tierpark Berlin as the species coordinator.

Jan Pluháček, Common hippo ESB keeper, was in 2015 appointed Co-chair of the IUCN SSC Hippo Specialist Group, thus creating yet another strong link between the TAG and the IUCN SSC Specialist Groups.

Evaluation of programmes:

During the report period the following programmes have been evaluated:

Malayan tapir EEP: Evaluation questionnaires have been completed by the relevant parties and have been returned to the TAG Chair. A summary has been developed by the TAG Chair and forwarded to the evaluation subgroup in the EEP Committee for consideration. Animal data will be forwarded



COMMON HIPPO (*HIPPOPOTAMUS AMPHIBIUS*), ZOO BASEL

for the qualitative evaluation of the programme early 2016 by the coordinator.

Conservation:

The chairman worked together with the chairman of the IUCN SSC Tapir Specialist Group, Patricia Medici, to secure funds for a worldwide tapir conservation project. And in September 2015 we could sign a contract on behalf of the IUCN SSC Tapir Specialist group with Fondation Segré for a donation of € 496,974 for a “World Tapir Conservation Programme” over a three year period. Money from this donation will be allocated to the conservation programmes for the four species of Tapirs according to specific project descriptions and will provide basis for their conservation activities during the coming three years. EAZA is not directly involved in the administration of the funds, but the TAG activities will reflect the activities made possible through this donation.

TAG members, and especially the species coordinator for the babirusa, Thomas Kauffels, and Kristin Leus as member of the IUCN SSC Wild Pig Specialist Group, continued their work in “Action Indonesia: Conserving Anoa, Banteng and Babirusa”. The aim of this partnership is to contribute to the long-term survival of Anoa, Babirusa and Banteng as described in three national action plans through establishing durable global *ex situ* activities and populations that effectively contribute to the conservation of these taxa; and supporting a range of *in situ* activities including research, education, capacity building and conservation actions.

Six partner organisations have formalised this collaboration by signing a ‘Memorandum of Understanding’ in 2014 for the long-term conservation of these taxa. This includes Indonesian and international organisations who are leaders in both the *ex situ* and *in situ* conservation of these species. The organisations are: Indonesia Zoo & Aquarium Association (PKBSI), European Association of Zoos and Aquaria (EAZA), The Association of Zoos & Aquariums (AZA), IUCN Species



CHACO PEKARI (*CATAGONUS WAGNERI*)

Survival Commission (SSC), IUCN-SSC Asian Wild Cattle Specialist Group (AWCSG), IUCN-SSC Wild Pig Specialist Group (WPSG). The agreement has also been witnessed by the Indonesian Ministry of Forestry who is the authority for species conservation in Indonesia. This agreement is a big achievement for Babirusa conservation (and for conservation of Anoa and Banteng as well), and the TAG will continue its full support of the programme.

DEER

TAG Chair: Noam Werner (Jerusalem Biblical Zoo, Israel)

TAG Vice-chair: Christian Kern (Berlin Tierpark, Germany)

Introduction

The Deer TAG is responsible for three taxonomically distinct groups: the chevrotains (mouse-deer; *Tragulidae*), musk deer (*Moschidae*) and true deer (*Cervidae*). Despite having the word “deer” in their common names, these groups are not related to each other any more than to other even-toed ungulate (*Artiodactyla*) groups. Following the taxonomy used in the Handbook of the Mammals of the World (Wilson, D.E. & Mittermeier, R.A. eds., 2011), a total of 70 species fall under the remit of the Deer TAG (10 *Tragulidae*; 7 *Moschidae*; 53 *Cervidae*). However ungulate taxonomy is still not fully resolved or unanimously accepted (e.g. Groves, C.P. & Grubb, P., 2011) and this number may change in the future.

Meetings

During 2015, the second Deer TAG mid-year meeting took place at Tierpark Berlin with 14 people, representing 13 institutions and 6 countries, attending the two-day meeting. The main outcome of the mid-year meeting is the opportunity to meet in person and discuss numerous issues. The progress of these issues was reported at the Deer TAG meeting that was held during the EAZA Annual Conference and is also reported here.

The TAG has also been represented in two other relevant meetings – the annual meeting of the Deer Committee of the Czech and Slovak Zoo Association at Zoo Chomutov, CZ (Noam Werner, TAG Chair) and the First International Symposium on the Conservation, Protection and Management of Milu (Pere-David’s deer, *Elaphurus davidianus*) and on Biodiversity in China that took place in Beijing, China (Noam



MICHIE'S TUFTED DEER (*ELAPHODUS CEPHALOPHUS MICHIANUS*) © NOAM WERNER

Werner, TAG Chair and André Stadler, Southern pudu (*Pudu puda*) EEP Coordinator). In both meetings that work of the TAG has been presented to participants.

In early 2016 both Noam Werner (TAG Chair) and Christian Kern (TAG Vice-chair) will attend the Joint TAG Chairs meeting and the AZA Hoofstock TAGs mid year meetings in Omaha, NE, USA. During the meetings we plan to meet our North-American counterpart and work on strengthening the ties between the respective TAGs.

Breeding programmes

Two new official breeding programmes have been formed during 2015, another one was upgraded and one programme manager was replaced. One monitoring programme has also started to operate.

- Agnieszka Urbańczyk (Wrocław) – new Balabac chevrotain (*Tragululus nigricans*) ESB Keeper (**new programme**).
- Matt Hartley (supported by Chester) – new Burmese

brow-antlered deer (*Panolia eldii thamin*) EEP Coordinator (upgraded from an ESB).

- Janno Weerman (Rotterdam) – new Michie's tufted deer (*Elaphodus cephalophus michianus*) ESB Keeper (**new programme** – previously monitored by TAG)
- Jan Pluháček (Ostrava) – new Vietnamese sika deer (*Cervus nippon pseudaxis*) EEP Coordinator. Jan took over Jana Pluháčková (Ostrava) who stepped down on her own request. The EEP is extremely thankful to Jana for the work that she has done in revitalising the programme.
- Noel Carey (West Midlands Safari Park) – new Formosan sika deer (*Cervus nippon taiouanus*) monitor

Furthermore, Leif Blomqvist (Nordens Ark), Forest reindeer ESB, has compiled a new husbandry guidelines document for the species. Three more husbandry guidelines/best practice documents are in preparation: Eld's deer (Matt Hartley, Burmese brow-antlered deer EEP Coordinator), tufted deer (Janno Weerman, Michie's tufted deer ESB Keeper), and

Eurasian elk (*Alces alces*) (Barbora Dobiášová, Prague Zoo).

The RCP has not been revised significantly as the TAG is awaiting the completion of IUCN threat category re-assessments for many species.

The evaluation of the Southern pudu EEP will be completed during 2016.

Population management challenges and potential solutions

Despite publication of the new EU regulations regarding import of hoofstock from third countries (Regulation (EU) No 780/2013), in reality the import of hoofstock from third countries into the EU has not become much easier and international transfers of these species is not a cheap option for increasing genetic diversity of programmes (i.e. bringing new founders). Therefore, the Deer TAG has been exploring the alternative of importing semen of potential founders and performing artificial insemination. The process has been started (and funded) by Zoo Ostrava with the aim of importing Siberian wapiti (*Cervus canadensis sibiricus*) semen from Russia to increase the diversity of the small, inbred population of the species in EU zoos. A veterinary certificate has been obtained and proved to be feasible to meet and semen has been collected at Kazan Zoo (EAZA member). Flight arrangements delayed the AI process at the end of 2015 and is planned for late 2016 instead.

Surplus of males, as in many other ungulate species, is also proving to be a real challenge. Whilst in some countries and in some institutions culling is legal and acceptable, this method alone cannot overcome the problem. Hence, the TAG has been operating in two directions in an attempt to solve this issue. On the one hand the TAG, through the programme managers, is trying to promote the keeping of all-male groups, while on the other it is trying to strengthen the ties with the private/non-EAZA sector.

Cooperation, contacts, *in situ* projects, research

Cooperation with the IUCN/SSC Deer Specialist Group (DSG) is on-going. Two TAG members, Noam Werner (TAG Chair) and Jan Pluháček (Vietnamese sika deer EEP Coordinator and Siberian Wapiti monitor) have been members of the DSG, and two more Christian Kern (TAG Vice-chair) and Matt Hartley (Burmese brow-antlered deer EEP Coordinator) have joined the DSG.

During 2015 the planning of a reintroduction project of the Vietnamese sika deer, which is extinct in the wild, to Guangxi Province in Southwest China has progressed and in early



DEER TAG PARTICIPANTS © KLAUS RUDLOFF

2016 a request for funding has been submitted. A genetic study of the Vietnamese sika deer population in EAZA is also planned as part of this project, which will be conducted by Jan Robovský (University of South-Bohemia and Zoo Liberec), who has been collaboration with the TAG in several genetic studies.

The genetic study of sika deer will be expanded to include also the Formosan sika deer, a subspecies that is highly threatened and potentially extinct in the wild. This study aims to test the purity of the population and estimate its importance for conservation and is conducted in collaboration with the Taipei Zoo in Taiwan that will examine animals from populations outside of Europe.

The Indochinese hog-deer (*Hyelaphus annamiticus*) *in situ* conservation project, in collaboration with Sarah Brook (WCS and IUCN SSC DSG), has also been progressing. Preliminary results of a genetic study funded by the Jerusalem Zoo have suggested that the taxon may actually be a separate species, results that generated a broader study that will also be conducted by Jan Robovský.

Leif Blomqvist (Nordens Ark), the Forest reindeer (*Rangifer tarandus fennicus*) ESB, has been involved in forest reindeer conservation in Finland and Russia, which includes two planned reintroduction projects, one in Russia and one in Finland, for which captive-bred animals from EAZA zoos will be used.

Three more programmes, the Burmese brow-antlered EEP, the Visayan spotted deer (*Rusa alfredi*) ESB and the Balabac chevrotain ESB, also have ties to conservation projects in range countries.

The TAG also was contacted by colleagues from China regarding assistance in population management of the local milu (Père David's deer) population and has been collaborating with the Chinese colleagues towards that aim.

Outreach and education

During 2015 the TAG has started operating its own Facebook page. On the page the TAG reports about its activities and also links to deer conservation-related news. The page has been very successful thus far, reaching thousands of people and having more the 200 followers (page likes).

At the 2015 mid-year meeting it was also decided that Shai Ben-Ami from the Jerusalem Zoo will serve as the social media and education advisor for the TAG. His status needs to be formalised, and this is expected to be completed soon.

CAMELID AND CATTLE

TAG Chair: Terry Hornsey (Africa Alive!, United Kingdom)

TAG Vice-chair: James Burton (Banham Zoo, United Kingdom)

Programmes

Anoa EEP:

- Husbandry guidelines being developed for use in Indonesia (1st draft already done).
- Most of the data from USA, Indonesia and Singapore is in the studbook current through the end of 2013.
- Leipzig Zoo is supporting the sanctuary/breeding centre in North Sulawesi, providing animal husbandry guidelines and a keeper to spend time there, they also have an MoU signed with the organisation.
- Global Species Management Planning (GSMP) workshop is organised for 25-30th January 2016 to be held at Safari Garden Hotel, Cisarua, Bogor, Indonesia.

Banteng EEP:

- Recommendations are being prepared.
- Looking urgently for new holders (probably two new holders in 2016, to be confirmed).
- Monorchidy - some bulls still have to be checked.
- Still awaiting results of genetic study.
- Global Species Management Planning (GSMP) workshop organised for 25-30th January 2016 to be held at Safari Garden Hotel, Cisarua, Bogor, Indonesia.

Gaur EEP:

- Only 43 animals in the population.

- Very high inbreeding coefficient $f=0,46$
- A skewed sex ratio at birth due to inbreeding has caused a surplus male issue.
- Working to try an export surplus males to a park in Florida but the process will certainly take several months.
- Species Committee also looking into possibility of sending 4.0.0 animals from Berlin to a new safari park in Vietnam.

European Bison EEP:

- So far, 13,000 records have been checked, going back to about 1990s, however, many more checks are required.
- Many institutions are interested in receiving animals.
- Genetic study is needed to resolve studbook uncertainties, and collections are being asked to take samples on an ad hoc basis to prepare for this study; discussions with a lab about the costs are taking place.
- Due to two parallel systems being in place, the EEP is not working with all the reintroduction programmes. Also, some aspects of certain reintroduction programmes do not match EEP aims, e.g. introducing males and females from same founder population; also culling is not accepted in some populations.
- A draft husbandry manual has been translated from Polish, and will be refined before being distributed to the EEP.

African Buffalo ESB:

Cape Buffalo

- New studbook and recommendations being produced.
- Long term management plan is underway.
- Husbandry guidelines drafted, but needs input to be finalised.

Dwarf Forest Buffalo

- New studbook and recommendations being produced.
- Outcomes of the IUCN 'AfBIG' African buffalo symposium - African Buffalo Interest Group think that there is less certainty about the effectiveness of wild population protection and therefore, the population needs to continue to be managed as is being done at the moment.
- Husbandry guidelines drafted, but requires further input to be finalised.

Vicuna EEP:

- The transfer of 6.6.0 animals to AZA should take place next year and 3.3.0 additional animals should go to Puebla/ Mexico.



SAOLA (*PSEUDORYX NGHETINHENSIS*) © DAVID HULSE

Research

Research proposal to use African buffalo population to study 'genetic rescue'.

Dwarf forest buffalo genetic work is possibly underway by Antwerp Zoo, grant pending.

INRA (French National Institute of Agriculture) launched a project involving new DNA technology for working on bulldog calves and monorchidy in banteng. A new round of samples has to be completed and holders notified as soon as possible.

Conservation

European bison reintroduction project in northern Spain to start with males only.

The TAG agreed to try and support the Noé Foundation Tamaraw project by sharing the information with relevant institutions, and to see if funds are available.

Collaboration continued between the Indonesian Zoo Association (PKBSI), The European Association of Zoos and Aquaria (EAZA) and The Association of Zoos and Aquaria (AZA), to transfer anoa, banteng and babirusa between the three regions (the babirusa was also added to these two species because of the parallel Action Plan that has been produced) as part of these species becoming GMSPs.

Anoa and banteng both proposed to become GSMPs and the GSMP Committee members, with a small number of exceptions, were agreed upon. A workshop is to be held in Bogor, West Java, Indonesia in 2016 to get PKBSI and Indonesian Ministry of Forestry agreement.

The TAG Chair and Douglas Richardson (EEP Coordinator for European bison) were made members of Saola Working Group (SWG) of the IUCN SSC AWCSG. The TAG Chair was elected SWG Conservation Breeding Task Group leader and Douglas Richardson was elected onto the SWG Steering



SAOLA CONSERVATION BREEDING CENTRE GOVERNMENT MEETING, HANOI NOVEMBER 2015

Committee.

Meeting with Vietnamese government officials held to discuss the possibility of establishing a saola conservation breeding centre in Vietnam and the setting up of an MoU to allow this to work.

TAG-produced documents

Saola Conservation Initiative:

The TAG assisted with the formulation of the 'Conservation Breeding of Saola – Proposed Agreed Principles For Success' document.

The TAG is involved in the drafting of a Memorandum of Understanding (MoU) with the Vietnamese government and the IUCN for the conservation breeding of saola.

The TAG is involved in the design of the 'Saola Conservation Breeding Centre' concept plan.

Action Indonesia:

GSMP applications for anoa and banteng put together.

Meetings Held

In November 2015 the TAG Chair and Douglas Richardson were part of a delegation from EAZA, Wildlife Conservation Society (WCS), IUCN and the Saola Working Group (SWG) of the IUCN SSC AWCSG who attended a second meeting with Vietnamese government officials in Hanoi to discuss the possibility of setting up a conservation breeding centre for saola and the drafting of an MoU accordingly.

TAG Chair and Dr Lien co-chaired the meeting between the SWG Conservation Breeding Group and Vietnamese government officials.

In November 2015 the TAG Chair and Douglas Richardson attended the Saola Working Group (SWG) of the IUCN SSC AWCSG bi-annual meeting in Hanoi.

Cattle and Camelid TAG ‘closed’ meeting held in September 2015 in Wrocław.

Cattle and Camelid TAG ‘open’ meeting held in September 2015 in Wrocław.

In September 2015, Indonesian Strategy meeting held during the EAZA Annual Conference in Wrocław.

In September 2015, Intensive Management of Saola Advisory Group held a meeting during the EAZA Annual Conference in Wrocław.

ANTELOPE AND GIRAFFE

TAG Chair: Jens-Ove Heckel (Zoo Landau, Landau, Germany)

TAG Vice-chairs: Sander Hofman (Royal Zoological Society of Antwerp, Antwerp, Belgium) and Tania Gilbert (Marwell Wildlife, United Kingdom (until November 2015)); Kim Skalborg Simonse (Givskud Zoo, Denmark (since December 2015))

Vision: Healthy, viable, free-ranging populations of antelopes, giraffes and okapis, ranging through intact ecosystems, valued and cherished both locally and globally.

Mission: To maintain healthy, genetically viable, self-sustaining, *ex situ* populations of okapis and a representative cross-section of antelope and giraffe taxa. These populations will be ambassadors, drawing attention to the plight of these taxa in the wild; a focus for fundraising for conservation; a source of individuals for re-stocking and reintroduction purposes and a research resource to improve husbandry, welfare and *in situ* conservation.

The Antelope and Giraffe TAG continues as one of the largest and most complex TAGs representing approximately 50 species (and about 90 taxa) held in European zoos. The stringent veterinary regulations imposed by the EU mean that it continues to be difficult to obtain animals from outside of the EU, whether it is a desirable taxon or to bolster our antelope and giraffid populations. Currently the TAG holds 11 EEPs and 9 ESBs; 4 species are part of ISBs; the remaining species are monitored by TAG members or through the subgroup leaders.

Instead of a mid-year meeting open for all TAG members, the Chair and Vice-chairs met for a two day working meeting



NATAL RED DUIKER © JENS-OVE HECKEL

in February 2015 on the kind invitation of Royal Zoological Society of Antwerp. During this meeting a lot of matters relevant to our TAG were covered, discussed and decided.

After some consideration and in agreement, with its long-term subgroup leader, we decided to dissolve the former mini-antelope subgroup and to transfer the remaining mini-antelope species into other existing subgroups within our TAG. In the future duiker species will be managed within the woodland antelope subgroup whereas dikdiks and klipspringer will be under the responsibility of the savannah antelope subgroup. We may need to re-evaluate this in future to manage workloads. In general the work of the programmes are based on the contents of the ‘EAZA Population Management Manual’. Further, we established a new reporting system for subgroup leaders to streamline workloads and provide a better insight in the functioning of the programmes. This included the development of a template for presentations on species programmes to ensure consistency across the TAG. Establishing a new reporting format for EEP coordinators and ESB keepers to the subgroup leaders will rationalise reporting and ensure that subsequent actions are carried out, as well as guaranteeing that reports are sufficiently detailed. Ideally we will get a report from the subgroup leaders twice a year ahead of the meetings.

EEP evaluations are now conducted on a regular basis. All species were analysed with Quick Population Analysis (QPA) thanks to EAZA’s population management advisor Laurie Bingaman Lackey and EAZA’s population biologist Kristine Schad.

There were some changes to the management of some species programmes. Sonia Freeman from Chessington Zoo,

United Kingdom became the new coordinator for the blesbok ESB. Bas Martens from GaiaZOO in The Netherlands took on the management of the newly established Springbok ESB. Approval for further ESBs for Natal red duiker and Thomson's gazelle are still ongoing. We hope to soon fill vacancies for the Arabian oryx EEP coordinator and the monitoring of Black wildebeest. In the near future every antelope species within EAZA will at least be monitored by a designated person.

As the term 'subgroup leaders' might be misleading with regard to the fields of research and conservation, we changed to the more valid term of 'coordinators'. Both Tania Gilbert from Marwell Wildlife, UK as the coordinator for conservation and Eulalia Moreno Mañas from Estación Experimental de Zonas Áridas in Spain as the coordinator for research are continuously collecting and distributing valuable information in these fields. The import and quarantine subgroup has been disbanded as information on these topics is now found through other sources within EAZA, e.g. vet committee, programme coordinators or EEO.

The TAG recognises the importance and the need to incorporate education into the TAG's activities. Ideally we would like to follow the established formats for conservation and research and appoint an education coordinator to liaise with the education committee. With regard to Best Practice Guidelines, we need to establish what guidelines have been produced and when. Once we have done this we can decide on further actions. Combining different species into one Best Practice Guideline could be a solution, but the TAG needs to explore the different options.

During the EAZA Annual Conference in Wrocław, Poland the programme started off with the reports of the TAG chair and of the various TAG subgroups during the first session. The second session was held as a closed meeting discussing further procedures and strategies for the revision of our TAG's Regional Collection Plan (RCP). This remains one of the most pressing matters. The production of an 'EAZA Population Overview Report' in ZIMS was completed and the draft of the RCP decision tree was finalised. The RCP document will follow the structure outlined in the EAZA Population Management Manual and with reference to the IUCN/SSC Guidelines on the Use of *ex situ* Management for Species Conservation. We aim to publish and present the new RCP at the EAZA Conference in Belfast in September 2016.

A number of antelope and giraffid conservation projects have been, and still are, managed or supported by EAZA institutions. Some of these projects are registered in the EAZA Conservation Database but this under-reporting means that

we are underestimating the contribution that EAZA members make to antelope and giraffid conservation.

It is with greatest sorrow that we had to accept the loss of two of our well-known TAG members. Mar Cano passed away in June 2015. Mar worked at the Estación Experimental de Zonas Áridas in Almería, Spain. She was one of Sahara Conservation Foundation's founding members and a tireless champion for Saharan wildlife. Further, Peter Lupták passed away through a tragic accident in December 2015. He was the zoological director of Bojnice Zoo, Slovakia. Peter was particularly well known and respected for his authority on large African mammals and his passion for phylogeny and taxonomy of African ungulates also documented by many excellent publications. During several trips to Africa and other parts of the world, he documented the world's biodiversity with brilliant photos and films, many of which can be admired on his web page www.wildafrica.sk or on our TAG's webpage www.antelopes.eu, which he created.

CAPRINAE

TAG Chair: Douglas Richardson (RZSS Highland Wildlife Park, Scotland)

TAG Vice-chair: Jean-Luc Berthier (National Museum of Natural History (retired), France)

The membership of the TAG has increased from 18 to 19 members and it oversees the following programmes: two EEPs (Muskox and Turkmenian markhor), seven ESBs (Goral, Takin, Blue sheep, Saharan barbary sheep, East Caucasian tur, West Caucasian tur and Nubian ibex) and we monitor the Argali, Arabian tahr and various Urial populations; our Japanese serow population is now managed along with the North American population as a joint programme managed from Los Angeles Zoo.

The only formal TAG meeting during the year took place at the EAZA Conference in Wrocław in September. It was very well attended and presentations were given on the Goral, takin and Nubian ibex ESBs, the Turkmenian markhor EEP, an update from the AZA Caprinae TAG, developments on ruminant transfers between regions and efforts to link with our IUCN/SSC counterparts; the last two items being the most significant.

For some years, thanks in a large part to the routine attendance of Jeff Holland, curator of mammals at Los



TAKIN (*BUDORCAS TAXICOLOR*), HIGHLAND WILDLIFE PARK, KINGUSSIE

Angeles Zoo and the Chair of the AZA Caprinae TAG, at the EAZA Annual Conference, we have had an active line of communication between our two TAGs. This has resulted in beneficial movements of new founder Japanese serow and Takin into Europe and we are moving towards facilitating similar movements from Europe into North America. For some years, we have been struggling with the barriers to the movement of ruminants between our two regions and it now appears that we will be soon be able to transfer animals with relative ease, at least compared with the situation in recent years past. The discussions and efforts have also included and will benefit the Cattle & Camelid and Tapir & Suiform TAGs as we are working towards getting Singapore Zoo Balai approval as the first step in being able to import ruminants from Asia. The first programme to benefit from these efforts will be the goral ESB due to the planned import of 1.2 new founders; this will also eventually benefit the AZA goral programme.

A long term goal for both the EAZA and AZA Caprinae TAGs has been to develop closer ties with the relevant IUCN/SSC specialist group. For a variety of reasons over recent years, this goal has been difficult to realise, but the more recent joint letter from Jeff and Douglas Richardson finally generated the desired response. Jeff has taken on the valuable role of resurrecting the Caprinae Specialist Group Newsletter,

which the EAZA TAG will actively contribute to, but more importantly we are aiming to develop an overarching Caprinae plan. This living document will be a combined global, or at least European and North American collection plan and an updated version of the specialist group's action plan.

Before we were strongly advised to explore closer ties with the appropriate TAGs in other regions and the relevant IUCN/SSC specialist groups, this TAG had been moving in that direction for some years. Thanks in a large part to the groundwork laid down through the active participation of Jeff Holland from America and the chairmanship of Douglas Richardson's predecessor, Jean-Luc Berthier, the EAZA Caprinae TAG is in a secure position to move forward.

