

Announcements

Early Registration for 2014 CBSG Annual Meeting



Registration for the 2014 CBSG Annual Meeting is now open! The meeting will be hosted by Central Zoo Authority in New Delhi, India, from 30 October to 2 November 2014. Visit <http://waza2014delhi.com/cbsg/registration.html> to register. Be sure to register before 31 July to get the early-bird price.

Tentative topics for presentation and working group discussion include:

- Implementation of the One Plan approach
- Continuing the momentum of Zoos & Aquariums for 350
- Substandard Zoos
- Collection Planning for Conservation
- 'Training' session on new IUCN guidelines (wildlife health, reintroduction, *ex situ* management, confiscated animals)
- A new initiative to ensure continued development of species risk assessment and population management tools
- The Asian Species Action Partnership
- The Way Forward for Collaborative Conservation Breeding Programs in India

Travel to India for the CBSG meeting requires the purchase of a Conference Visa. If you plan to join us in India, we encourage you to get started on applying for this visa to ensure you get it in time. Visit <http://waza2014delhi.com/visa-assistance.html> for more information.

IUCN World Conservation Congress 2016

The IUCN World Conservation Congress will take place in Honolulu on 1-10 September 2016. For more information visit <http://iucn.org/?14840/Hawaii-to-host-the-next-IUCN-World-Conservation-Congress>.

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Example of the One Plan Approach: Al Ain Zoo's Arabian Sand Cat Conservation Planning Workshop

In November 2013, Al Ain Zoo organized the first conservation planning workshop for the Arabian sand cat, an endangered felid. This workshop explicitly followed a One Plan approach framework, and included members



Al Ain Zoo

of the *in situ*, *ex situ*, and research communities to develop an integrated conservation strategy for the species. To read more about this example of an OPA workshop, visit http://www.wmnews.com/newsletters/1401888956WMEV711_eng-10.pdf. Feel free to send us examples of projects that follow CBSG's One Plan approach framework to be featured in upcoming eUpdates.



Recent Activities

Development of Veterinary Training Activities for China

In November 2013, CBSG facilitated a workshop in China to develop an organizational and implementation plan for the newly constructed Dujiangyan Giant Panda Rescue and Disease Control and Prevention Base (see [February 2014 eUpdate](#)). During this process, several training workshops were identified to occur over the next two years to build capacity both at the Dujiangyan Base and for professionals throughout China in disease investigation and in clinical skills application for disease diagnosis and treatment.



To further develop these training initiatives, 16 veterinarians and epidemiologists from five zoos and three universities met in April 2014 to outline a general training and educational strategy, and develop draft agendas and timelines for these training workshops. CBSG was asked to facilitate this workshop, which was organized by the Smithsonian National Zoological Park and hosted by San Diego Zoo Global. Previously identified research priorities and the need for a research strategy for sample collection, storage, and documentation were also discussed. These initial training courses are viewed as the first step in an ongoing effort to build veterinary and epidemiological expertise in China to contribute to disease prevention and control for giant pandas and other Chinese wildlife.

VORTEX 10 Advanced Modeling Course

In May, CBSG conducted a training course at the Brookfield Zoo on the use of the *VORTEX* modeling program for population viability analysis (PVA) and species management planning. This advanced course included participants from several US zoos, universities, National Park Service, Department of Natural Resources, and CBSG regional networks who are using *VORTEX* to model a variety of species such as masked bobwhite quail, Allegheny wood rats, fur seals, and dolphins. This is the first course to provide training in the newly released *VORTEX 10* software, and focused in detail on program options for building complex population models and assessing strategies for intensive population management.

VORTEX is an individual-based, stochastic simulation model for population viability analysis developed by Bob Lacy (Chicago Zoological Society). *VORTEX* has been used to model hundreds of species in the past 20+ years, and is an integral component to the CBSG PHVA process. The software and manual can be downloaded at: www.vortex10.org/Vortex10.aspx. Please contact Kathy Traylor-Holzer (kathy@cbsg.org) if you are interested in future training courses offered by CBSG.

EAZA Conservation Forum and WAZA Conservation and Sustainability Committee Workshop



CBSG is honored that EAZA chose the One Plan approach as the theme for its Conservation Forum held from 6-9 May in Leipzig, Germany and invited us to present the opening address. A series of diverse and high-quality presentations reinforced the fact that the One Plan approach is a valuable framework around which to build collaborations and meaningful conservation action, and that EAZA zoos and aquariums are actively realizing its potential to alter the species conservation landscape. The Forum, which was extremely well organized by the EAZA team and beautifully hosted by Leipzig Zoo, also provided CBSG with the opportunity to further engage the EAZA community in our Zoos & Aquariums for 350 climate change movement and build support for the 22 May day of action, “Show the Wild Face of Climate Change.” We are grateful for the support and enthusiastic collaboration of the EAZA office and members.

Immediately prior to the Conservation Forum, WAZA’s Conservation and Sustainability Committee, led by Rick Barongi, convened a very productive two-day workshop to advance the drafting of the revised *World Zoo and Aquarium Conservation Strategy*, to which CBSG is actively contributing. The goal of the new document is to reinforce the messages of the earlier version: that conservation means securing—for the long term—viable populations of species thriving in healthy ecosystems, and that zoos and aquariums are uniquely poised and have an obligation to contribute to successful species conservation. More importantly, it is designed to provide a compelling, user-friendly and example-rich strategy to assist zoos and aquariums in doing so.

Show the Wild Face of Climate Change

On May 22, zoos, aquariums, botanical gardens, and other conservation organizations around the world participated in a day of action to “Show the Wild Face of Climate Change” in observance of the UN International Day for Biological Diversity. The initiative shined a spotlight on the risk to biodiversity posed by climate change, and united the world’s zoo and aquarium community in calling for urgent action on climate change.

Seventy-four organizations from 25 countries and spanning all seven continents and all regions of the globe submitted, and shared through social media, more than 350 photographs and two videos of animals, staff, and zoo visitors along with the logo of our climate change initiative “Zoos & Aquariums for 350.” Over 150 species were represented.

“Show the Wild Face of Climate Change” put a face to the urgency of addressing climate change and indicated zoological institutions’ solidarity with the global climate change movement led by 350.org. The photos and their descriptive captions, which can be viewed, downloaded, and shared by visiting <https://flic.kr/s/aHsjWNxCqt>, have been sent to government decision makers around the world to continue to raise awareness about this issue. The activity was featured on [National Geographic NewsWatch](#), [Mongabay](#), [ZooBorns](#), and many other blogs and local news websites, expanding the reach of the Z & A for 350 message. To see a list of articles about this activity, visit <http://www.cbsg.org/blog/201406/wild350-link>.

Thank you to all who participated in this day of action. We were thrilled by the enthusiasm for this activity and amazed by the creativity displayed in the photos. If you have not had the chance to look through the photos, we highly recommend it! <https://flic.kr/s/aHsjWNxCqt>

“The ‘Show the Wild Face of Climate Change’ initiative was the largest single-day global zoo event in history. The success of this day for climate change action is a good omen for future campaigns to engage zoos to recruit their visitors and members as global citizens with responsibilities for the global commons of the atmosphere, waters, available lands, and biodiversity.”

- George Rabb, President Emeritus of the Chicago Zoological Society and former Chair of IUCN SSC



Wellington Zoo, New Zealand



Zoo Atlanta, GA, USA



Taipei Zoo, Taiwan



Balneário Camboriú Zoo, Brazil



Two Oceans Aquarium, South Africa



Bristol Zoo Gardens, UK



Tata Steel Zoological Park, India



Point Defiance Zoo and Aquarium Staff, WA, USA

Amphibian Ark “Advance”

Amphibian Ark (AArk) recently welcomed Anne Baker as its new Executive Director. In late May, AArk staff were joined by previous staff members, representatives from the Amphibian Survival Alliance (ASA), representatives from CBSG, and other amphibian experts for a three-day Strategic Action Planning workshop hosted by Zoo Atlanta. During the workshop, AArk’s vision *The world’s amphibians safe in nature* was reaffirmed, and AArk’s mission was revised slightly to: *Ensuring the survival and diversity of amphibian*



species focusing on those that cannot currently be safe-guarded in their natural environments. Dr. George Rabb reviewed the history of the amphibian crisis, first recognized in 1989. Under the leadership of the SSC, the Declining Amphibian Populations Task Force (DAPTF) was formed in 1990. In conjunction with Chicago Zoological Society, DAPTF convened amphibian experts from around the world at a 1997 conference that pinpointed the chytrid fungal agent Bd as responsible for enormous population declines, and in some cases extinctions. Concerns over the devastating impact of chytrid led to the formation of the Amphibian Ark in 2006 and the Amphibian Survival Alliance in 2011. Dr. Rabb noted that in spite of a substantial effort over the past 25 years, we still have a long way to go in addressing the amphibian crisis.

Presentations on the work of ASA, AArk, and the current state of research on probiotics laid the groundwork for the development of a three-year Strategic Action Plan for AArk. Top priority goals include: developing more well-planned and realistic programs that articulate plans from initial inception of captive programs to secure wild populations; catalyzing new assurance colonies while ensuring that existing programs are monitored and evaluated; and expanding our connections with partners. Participation from ASA and other partners added great value to this workshop, which was an important step in developing AArk’s future direction.

Update on Colorado Pikeminnow Population Viability Analysis

CBSG is now entering the final stages of work on developing a detailed population viability analysis (PVA) for the San Juan River population of the Colorado pikeminnow (*Ptychocheilus lucius*). The project was initiated in July 2013 and the final project report will be delivered to the United States Fish and Wildlife Service at the end of June 2014. The objectives of the project are:

- To develop a realistic and credible model of current Colorado pikeminnow population dynamics in the San Juan River
- To identify specific demographic parameters (reproductive success, age-specific mortality, etc.) that are the primary drivers of population growth or decline
- To study in detail the impacts of specific anthropogenic processes—namely, deposition of mercury (Hg) in the river and resulting bio-accumulation in individual fish—on long-term pikeminnow population persistence
- To identify other threatening factors that may be the target of future management activity designed to improve long-term chances of species persistence of pikeminnow in the San Juan River



Colorado Pikeminnow

This species is characterized by very high fecundity (egg production), and is managed in the river by stocking large numbers of larval fish each year to offset relatively high levels of juvenile mortality from predation by non-native species and other factors. Therefore, our traditional PVA model of choice, the individual-based simulation model *VORTEX*, is not well suited for this kind of project. However, the recently released Version 10 features a new population-based mode that now allows us to model very large populations with a broad array of different life histories. Using this new feature, we developed sophisticated models exploring a variety of different threat scenarios. We expect to use this model soon in collaboration with the US Fish and Wildlife Service to evaluate alternative management options for the species.

A Workshop of Applying Adaptive Management Principles to *Ex Situ* Conservation

Conservation biologists will manage an endangered species and/or its habitat to improve the state of the system, but there is nearly always significant uncertainty about how the system actually works, which makes it difficult to choose the best management action. We can use adaptive management (AM) when we expect that our outcomes could be improved by reducing or solving this uncertainty. AM encompasses a range of approaches, from choosing the best actions according to current knowledge and learning passively from their outcomes, to actively seeking the combination of actions that provides the best chance of learning and maximizes long-term outcomes (even if a bit costly in the short term). Like all forms of structured decision making, adaptive management requires clear objectives, a range of alternative actions, and an explicit model of the system that we can use to evaluate the alternative actions.

The use of AM carries real promise for improving *ex situ* population management. Unfortunately, successful implementation of AM methods is rare and incomplete across the conservation community. In an attempt to start a process of implementing successful AM in the *ex situ* community, a group of experts on captive population management and decision science gathered in Melbourne, Australia to exchange information and develop an action plan for moving forward the application of this promising methodology. CBSG and colleagues participated in this workshop and are working on a number of projects that emerged from the discussions, including:

- Classifying the types of uncertainty faced by *ex situ* population managers
- Defining precisely how AM can best support the *ex situ* management community
- Producing concise guidelines, to be distributed by CBSG and the Reintroduction Specialist Group, that help managers correctly assess their needs and to find the ideal AM tool to address them
- Developing prototype solutions to representative case studies of *ex situ* management and reintroduction, and to publish them in the scientific literature

Fostering Collaborations in *Ex Situ* Population Management

To promote improved population viability and species conservation, regional zoo associations are now actively seeking collaborations both among themselves and with IUCN Specialist Groups and other conservation colleagues. The European Association of Zoos and Aquaria (EAZA) provided the opportunity to significantly increase inter-regional collaboration by organizing the first Joint TAG (Taxon Advisory Group) meeting in Alphen, The Netherlands in early June. Over 140 TAG chairs or similar *ex situ* managers from many regional zoo associations (including EAZA, AZA, ZAA, JAZA, SEAZA, PKBSI, PAAZAB, ALPZA, AMACZOOA, WAZA) as well as ISIS and IUCN attended the two-day meeting hosted by Avifauna Bird Park to discuss various aspects of global *ex situ* management. CBSG (HQ and Regional Network Team staff) contributed by giving presentations and conducting mini-workshops and discussions focused on global collection planning, capacity building, and integration of conservation activities in a One Plan approach framework. The Joint TAG meeting immediately was followed by three days of EAZA TAG meetings, to which all attendees and regions were invited. Many new interregional relationships were formed and preliminary plans initiated for increased collaboration for the management of jointly held species.



CBSG, ISIS and regional zoo association representatives also participated in the WAZA Committee for Population Management (CPM) meeting that preceded the Joint TAG meeting, setting the stage for these discussions. CPM reviewed the status of the current six WAZA Global Species Management Plans (GSMPs) and discussed opportunities for global *ex situ* management of additional species. Several of the current GSMPs were highlighted at the Joint TAG meeting along with other examples of successful variations on interregional management and collaboration.