Conservation Breeding Specialist Group CBSG Annual Meeting 2006

The 2006 Annual Meeting of the Conservation Breeding Specialist Group was held 26-28 August 2006 in Halle, Germany a location near Leipzig, where the World Association of Zoos and Aquariums met the following week.

The CBSG meeting is normally the venue of several other meetings of the zoo conservation community. This year CIRCC, the Committee for Inter-Regional Cooperation in Conservation, the meeting of Regional Associations and the CBSG Steering Committee meeting were held.

One of the main activities of the main CBSG meeting is the working groups. Persons interested in a particular topic request a slot in the meeting in which they introduce their issue to the meeting and invite persons interested and/or knowledgeable about it, to join their group. The topics consist of some of the cutting edge issues in conservation and zoo biology and management today. This year the following groups were convened; their convenors are also listed. A brief summary of the discussions follows for most of the groups.

Working Group Topics
Amphibian crisis response planning *(Kevin Zippel)*
Conservation planning for CBSG Europe *(Bengt Holst)*
Establishment of global species management programs *(Jonathan Wilcken)*
WAZA Initiative to Engage Poorly Maintained Zoos *(Sally Walker)*
Integrated, seamless conservation *(Lesley Dickie)*
SIS and the zoo and aquarium community *(Jim Ragle)*
Are we sufficiently incorporating climate change dynamics into our species evaluation and modeling processes? *(Paul Pearce Kelly)*
Field Project Prioritization *(Onnie Byers/Jo Gipps)*

Other features of the meeting include reports from the regional networks of CBSG, including Mexico, Indonesia, Europe, MesoAmerica, Japan, South Asia, Southern Africa, etc. Also the prestigeous Ulie Seal Award for Innovation is given each year at the meeting. This year Dr. Jon Ballou, Conservation Biologist, was awarded the prize. Jon has visited India and taught population biology in a two part series of zoo and field based trainings for DFOs and zoo managers looking after Lion-tailed macaques.

Amphibian Working Group Report

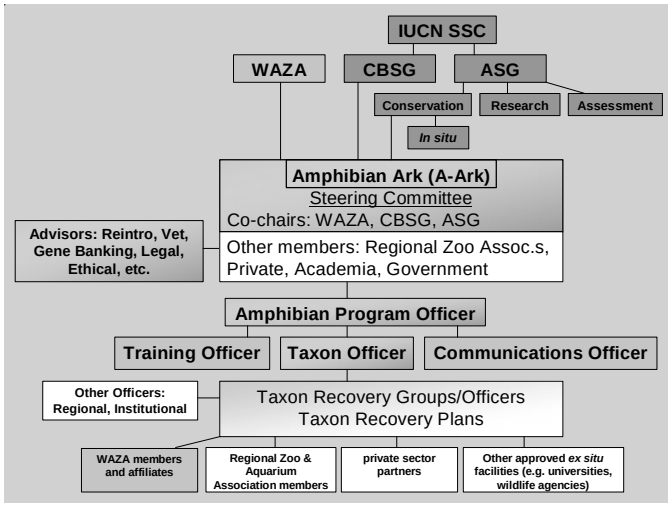
The working group opened with 3 presentations.

1. Joe Mendelson set the stage by discussing the Amphibian Conservation Action Plan (ACAP), the Amphibian Specialist Group (ASG), and the elusive Amphibian Survival Alliance (ASA). The ACAP calls for, among other things less pertinent to the immediate discussion, an *ex situ* response to help stem the loss of amphibian species. The ASG will help provide guidance in that process, and the ASA represents the global forum to mobilize and coordinate partners and stakeholders (including zoos) to contribute, advise, and act on advancing the ACAP.
2. Gordon McGregor Reid followed with a presentation on the beginnings of organization within the *ex situ* community, including the strengths/roles of WAZA and CBSG, as well as vision, mission, values, and priorities in the developing *ex situ* group.
3. Bob Lacy closed with a discussion of taxon prioritization and comments on resource allocation.

After some initial discussion, the group decided to split in order to work on 2 topics simultaneously: organization and communication.

Organization
Members: Richard Gibson, Bob Lacy (facilitator), Joe Mendelson (recorder), Dan Wharton

The organization subgroup formalized an organizational structure called the Amphibian Ark or A-Ark for amphibian conservation within the *ex situ* community (Fig. 1).



Communication
This group first discussed issues of communication, including: what is the message we wish to convey, how do we deliver the message, reaching our target audience, getting director buy-in, effective global communication to minimize duplication of effort, etc.

It was then decided that in the limited time available, we should focus our efforts on two items: (1) articulating the

message, i.e., creating a problem statement including call to action to be delivered at the WAZA conference in Leipzig and beyond, and (2) a 'menu' of options for zoos to take action.

(1) The Message
Addressing the amphibian extinction crisis presents the greatest species conservation challenge in the history of humanity. Without immediate captive management as a stopgap component of an integrated conservation effort, hundreds of species would become extinct. This conservation challenge is one that we, the *ex situ* community, are uniquely capable of addressing. Never before has the conservation community at large charged zoos and aquariums with a task of this magnitude. This is an opportunity for every zoo and aquarium, regardless of size, to make a vital conservation contribution, and for our community to be broadly acknowledged as a credible conservation partner. Supporting this call to action is clearly within the financial capacity of all zoos and aquariums, and engages the diverse expertise found within all institutions. Our goal is 100% participation of WAZA zoos and aquariums and the regional associations. If we do not respond immediately and on an unprecedented scale, much of an entire vertebrate class will be lost, and we will have failed in our most basic conservation mission as defined in the World Zoo and Aquarium Conservation Strategy. This is simply unacceptable.

(2) The Menu

- Expand and support capacity-building (facilities and expertise), at home institutions and in range countries.
- Send staff to participate in training courses or internships at institutions with existing capacity, or sponsor someone in need.
- For institutions with facilities and appropriate collections, host a training workshop.
- Assess, upgrade and expand amphibian facilities.
- Contribute financially to supporting a dedicated staff position in global (WAZA/CBSG/ASG amphibian officers) or regional (AZA, EAZA, etc.) coordination (not traditional animal manager, a *full time dedicated coordinator*).
- Immediately support and expand existing efforts:
- Rescue programs
- Field surveys
- Regional programs, e.g. SSP, EEP, ASMP, APP
- Research, especially husbandry, disease
- Local amphibian conservation projects
- Develop information and deploy awareness programs targeted for strategic stakeholders.
- Websites, zoo graphics
- Education materials
- Media releases
- If each WAZA institution commits to saving a single species, our goals will be met. Therefore, each institution should have a rescue center, either onsite or in an area in need of capacity building, and preferably both.

These efforts should cover one 'species equivalent' – that is, each center should have capacity for at least 500 animals in a managed program (the target per species), not necessarily all representatives of any given species. For example, 2 institutions both develop space for 250 specimens from each of 2 target species.

- The number one priority for all centers should be native species.
- Each institution should also be involved with exotic taxa (as guided by regional TAGs), preferably in range country; out-of-range species programs should be coupled with range-country capacity building efforts.
- All programs should be consistent with global (AARK) and regional plans.
- These centers should conform to husbandry standards as set by the Panama workshop.
- Fundraising individually and collectively to support above.

Global Climate Change -- Are we sufficiently incorporating climate change dynamics into our species evaluation and modelling processes?

Even the most optimistic predictive global warming modelling shows that the ramifications of human induced climate change for the planet's natural systems, habitats and species are likely to be increasingly severe. As temperature, precipitation and a host of other climate related conditions are altered even the best managed terrestrial and aquatic protected areas will be increasingly vulnerable to drastic habitat alteration. The migration ability of their dependant species to catch up with those shifting habitats (assuming such habitat shifts are possible at all, given the fast rate of change and often highly fragmented landscape considerations) is likely to become a key species conservation management issue. For many montane, island and polar region species there is effectively nowhere left to go of course. Analysis by Chris Thomas and colleagues suggests that the mid-range global warming predicted for 2050 threatens between 15 and 35% of all terrestrial species with extinction as their habitats shift and shrink or disappear. Increased disease threats (such as the current chytrid fungus spread in Costa Rica), movement of competitor and predator species and human conflict issues, are also likely to present major additional climate change related conservation challenges. Hence the question are we sufficiently incorporating climate change dynamics into our species evaluation and modelling processes and how might we further improve our ability in this regard? If we can do so then in addition to being much better placed to realise our specific SSC conservation remit we should also be able to provide a range of informative species and habitat level threat data to assist the wider conservation effort to ensure that mitigation action to keep the climate change threat as contained as possible is realised.

CBSG Working Group on IUCN: Species Information Service (SIS) and the Zoo and Aquarium Communities

Background

The IUCN Red List contains global status and distribution information on more than 40,000 species of plants and animals. The Red List status is determined by global assessments of species carried out by IUCN/SSC and its partners. The idea for a Species Information Service (SIS) was conceived a number of years ago because of the need to improve systems supporting the IUCN Red List data collection and management processes. Initial plans were very ambitious for a comprehensive database for use in conjunction with the Red Listing process. Early efforts for development were unsuccessful due to the complexity that was expected to be built into the system. In 2005, as existing information systems and processes could not keep pace with the ever-expanding knowledge and information generated by the SSC on Red Listed species, IUCN devoted a full staff position to head up the project to develop the SIS. The focus was simplified to build a basic core module concentrated on data relevant for Red Listing. The aim of SIS shifted from mere support of Red Listing of species to supporting the collection, management, and sharing of information and knowledge on species within the SSC.

The Species Information Service (SIS) will be a database on species that may include such information as habitat, threats, use/trade, range of distribution and occurrence, life history, Red List assessment, conservation actions, ecosystem service, and how species contribute to human livelihoods. SIS will support and improve the delivery of accurate, current, comprehensive species-based biodiversity data from the expert data providers to organizations that need such data to guide their decisions. It is expected that SIS will be available to all within SSC to use to obtain information and available for managing information if appropriate.

This type of species information is also gathered for CBSG processes such as Conservation Assessment and Management Plans (CAMPs) and Population and Habitat Viability Analysis (PHVA). The CAMP process is one of prioritization, assembling experts from various sectors (wildlife researchers, Specialist Group members, representatives from the academic community and private sector, captive managers, government authorities) to evaluate the threat status of all taxa in a broad taxonomic group (i.e. in a geographical region or country) and plan appropriate conservation action. PHVA process is a similar program for a single species or taxon.

Discussion

SIS was initially planned to meet the needs of Specialist Groups. During the development process, this target group expanded but setting of more realistic goals has once again reduced the target group to SSC and zoo/aquarium partners. CBSG may have different needs than Taxon Specialist Groups in using SIS to assist in CAMP and PHVA processes. The zoo/aquarium community collects information on individual specimens and groups in ISIS, and this information could also be used to assist in CBSG processes. ISIS members would benefit from SIS to help with management of animals in captivity. Conversely, information in ZIMS (the new web-based ISIS Zoological Information Management System that is soon to be deployed) would be useful to assist those working on the Red Listing and CBSG processes.

ISIS members would benefit from being able to access SIS while working within ZIMS. Information that would be useful for captive management includes status in the wild, reason for threatened status, habitat information, life history information. Zoos that are looking for field programs to support would want to know the priorities for species action plans.

What is the goal of SIS as a service tool? SIS will contain information generated within the SSC at a species level and potentially at a higher level and not in terms of individual specimens. People could go into the SIS website and type in a species name and get all the information in one place. It would be very useful to have a tool available to integrate not only by species but by range (area) – to draw a line through different layers of SSC information and find out what is available for a specific geographical region or area. The ISIS member audiences may be interested in full conservation of species in a certain area. May be working on a certain species *in situ* and could find out what else is in trouble in that same area. In the Red List database, there are now about 6000 files of spatial distribution. It is expected that 60-70% of non-data-deficient species will have distribution maps that can be queried in the future as range maps are currently required for Red Listing assessments.

Reintroduction Specialist Group is interested in conservation-related status of species in a thematic group. Start looking at information for a species without asking particular question or in a particular framework. Extract particular solution for a certain population which can lead to action that would be taken – captive breeding, reintroduction, translocation, etc. Start from a very focused narrow vision – Red List intent is different. Type of questions answered is different. RSG, similar to CAMPs, focuses on threats and details outside of Red List information to determine conservation action. Conservation needs may be determined for a specific population or area of concern.

Development of SIS: Time frame for development of the proposed core system would be 9 months to 1 year after initial work begins. IUCN estimates cost of $125,000 to $150,000. IUCN has a position devoted to SIS. Fundraising may initially be marketed by requesting funds to support the Red Listing process. Develop a core of information to start with and then can expand. Who will be able to enter data? Could possibly develop different modules for different authorities (e.g. have a module on trade/commerce for TRAFFIC). Will begin with core data. Data collected from CBSG processes could be incorporated into SIS, as there may be different information that that collected from the Red Listing process.

CBSG Integrated, Seamless Conservation Zoos Conservation Audit

Problem Statement
Field activities can be easily and handily labelled 'conservation', regardless of whether any attempts have been made to measure the real impact of those actions. Many zoo staff implement action in the field, and this is relatively easy to describe, with zoos routinely reporting on these activities in annual reports and reviews. However, describing which aspects of the work carried out *within* zoos has been less defined.

Zoos are the only conservation organisations that have the opportunity to position themselves as (and actively be) completely holistic conservation organisations, seeking to provide integrated seamless conservation from zoos to the wild. Yet, zoos are unsure as to how to accurately describe their *ex situ* work. What do they feel is a conservation action and what is simply an activity to run the zoo as a visitor attraction? Can the totality of their actions that contribute to positive conservation outcomes be described and communicated both to an internal institutional audience and an external audience? Better reporting may enable a systematic review of activities to be undertaken, and, if required, a re-distribution of resources.

ZSL has produced a draft framework for a zoo-based conservation audit and this will be tested in 2006/07. This draft framework will form part the discussion on day two.

How do we define what we do?
There then followed a discussion around the topic of education in zoos and whether or not there can be a split between 'basic' education and 'conservation' education.

What is conservation education in our zoos – we can have education that does not have any conservation impact

What do we mean by conservation education – when is conservation actually conservation i.e. having a conservation end product

Reviewing the draft ZSL framework
The Cambridge Conservation Forum has described seven core types of conservation action;

- Site management
- Species management
- Policy and legislation
- Livelihood enhancement and alternatives
- Training and capacity building
- Education and awareness raising
- Research and conservation planning.

This is a useful way of grouping activities, and permits clearer identification of areas of activities. The ZSL audit refers to these areas as ultimate activities (see attached draft framework and flow of activity chart)

First three categories are lifted out of the EAZA TAG criteria for the ARTAG, FAITAG, TITAG

1. Ex situ management 1 – ARK species
Maintaining species that are extinct in the wild (locally or globally) and which would become completely extinct without *ex situ* management. E.g. *Partula* sp., Socorro dove (*Zenaida graysoni*)

Agreed Criteria 1 and using recommendations from specialist groups (this may be different for local levels and BAPs)
[not all EEP work is species conservation – but preservation of captive populations]

2. Ex situ management 2 – Rescue species
Maintaining species that are in imminent danger of extinction (locally or globally) and are being managed in captivity as part of the recommended (by a recognised authority e.g. IUCN) conservation action. E.g Bali mynah (*Leucospar rothschildi*)

Rescue Species: fine

3. Ex situ management 3 – Supplementation
Maintaining species for which *ex situ* management may benefit the wild population through breeding for supplementation as part of the recommended (by a recognised authority e.g. IUCN) conservation action. This is regardless whether or not the supplementation takes places (with respect to a timeframe appropriate to the species). E.g. Corncrake (*Crex crex*)

Long-tailed Marmot
Marmota caudata

Global Species Management Programs

Background / workshop scope
CIRCC has developed a framework for the management of global programs. The working group explored the issues surrounding establishing global programs including:
- The need for global programs - what is the rationale to establish a globally managed breeding program?
- What global programs might look like
- How does a global managed breeding program relate to regional breeding programs such as EEPs, SSPs, etc.?
- What obstacles might need to be overcome to run global programs
- What would need to be in place to ensure the success of global programs
- What do you need as minimum to call a program a globally managed breeding program?

Definition
A global program involves managing a particular taxon
- With agreed set of goals
- To an agreed strategy
- Across more than one region (ideally all regions)
- With the aim of involving all regions in the program

Examples of successful programs
Partula snail
- From the start the need for global cooperation was apparent to keep the population genetically healthy.
- The benefits were obvious for the program and its stakeholders. Everybody understood the bigger picture from the beginning.
- Began as an international managed program. Did not need to build from separate regional programs.
- The program was driven by experts in the species from the beginning.
- Partula snails are relatively easy to transport and exchange.
- Partula are not highly political species

Examples of problems with programs
Decisions on whether to manage at species or sub-species are being made at a regional level without considering how this may affect other regions, e.g.
Giraffe taxa
- Some regions have decided to manage at species-level
- Subspecies are mixed
- Such decisions can effect other regions
- Results in reduced availability of particular subspecies for regions that manage at subspecies-level

Examples of successful prioritisation
Somali wild ass
- Only three institutions in one region keeping the species
- New lineages needed for the population
- TAG chairs and breeding coordinators of several regions planned together to identify and organize animals for importation to the region in need

Types of programs
Program structure
Global programs can cover a rage of structures
- Closely centrally coordinated – e.g. the partula model
- Strategic links between semi-autonomous regional programs to achieve common goals – e.g. the okapi model

Issues/obstacles
Logistic constraints - transportation of animals is very difficult for some species, and to and from some countries
- Legal reasons – permitting, international treaties (e.g. CITES)
- Biosecurity reasons

oThe initiation of a globally managed breeding program can provide substantial justification for international animal movements, which can be communicated to GO's, NGO's and treaty bodies, such as CITES
oIt is important to communicate and educate governments, airliners, and other authorities.
Data needs - many regional studbooks, fewer international studbooks
- Disagreement between the data
- ZIMS will better facilitate global breeding programs.

Need commonly agreed goals / operating framework
- There is currently no agreed 'code of conduct' for operating within a global managed breeding program.
- No framework for setting global goals? Which body or format will set the goals for the global population? Needs to be an international forum so decisions are acknowledged in the regions.

Ownership issues can constrain the movement of animals
- Increasingly governments are claiming ownership of endemic species and requiring coordinated management before allowing cross-border transportations.

oGlobal programs may assist
- Where a monetary value is associated with a species, institutions can become reluctant to transfer animals as part of a conservation breeding program

Human factors (e.g. political issues, personalities)
- Territoriality, personality clash, poor communication – significant obstacles for wider collaboration

Regional differences
- Population management capacity
- Husbandry standards
- Cultural
- Successful programs will need to respect differences, while working to help build capacity/improve standards wherever needed.

Complexity
- If programs are too complex – will never work well.

Evaluation
- An evaluation process will needed to enable review of the program strategies – are the strategies being successful in achieving goals

Cost
- Can be high cost involved in this type of management (e.g. movement of staff, animals, building facilities)

Key requirements for success:
- Species prioritization – the selection of a species appropriate for global management
    - Compelling reason
    - Likelihood of success
- Quality of program coordination
- Communication
- Evaluation