



CBSG News

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*Newsletter of the
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Maintaining Viability: CBSG Through the Eyes of Genetic Theory

This issue of *CBSG News* provides reports from our recent Annual Meeting that was held in Puntarenas, Costa Rica. First, I want to express my sincere thanks to Yolanda Matamoros and her staff for being such wonderful hosts. It was great to be able to hold a meeting on species conservation in a place that is so rich in biodiversity and has a well-deserved reputation for working hard to conserve their biological heritage. For those of you who were not able to attend our Annual Meeting, or who left a little early to visit some of the magnificent parks of Costa Rica, below I summarize the comments that I made at the closing of the meeting.

My academic training was primarily in population genetic and evolutionary theory. It is often not clear how that helps prepare me to do conservation – which is much more about people and ideas than about genes. But as I was watching groups working and listening to presentations at the meeting in Costa Rica I started thinking that maybe there are some important lessons from genetics that do apply to conservation and especially to meetings such as this one.

A focus of much of my scientific work is the dangerous genetic processes that occur in populations that remain small and isolated. One of the problems is inbreeding, which decreases individual fitness and resilience. Small, isolated groups also suffer from losses of diversity, especially the loss of rare or unique alleles and those that have little value now but can confer needed adaptations later. As a consequence of these changes, populations lose adaptability, lack the ability to cope with new stresses, and lose the ability to withstand major environmental change.

People have noted before that there are many similarities between genes and ideas – some of the concepts in population genetics come from information theory and some of the concepts about the spread of ideas and culture come from genetics and evolutionary theory. I think that there are obvious parallels between the genetic processes in small, isolated populations and the viability of groups like CBSG. CBSG is a relatively small network, and we have developed some wonderful and innovative specializations. (Maybe we aren't as wonderful an animal as is the fer-de-lance or a quetzal, but CBSG is an important component of the diversity of conservation organizations.) Yet we must always be careful not to let ourselves become too inbred, lose diversity, or lose adaptability.

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To avoid genetic problems, populations need occasionally to outcross, in order to bring in new genes. Our Annual Meeting is one way that the CBSG outcrosses to restore diversity, vitality, and adaptability. Although outcrossing has important benefits and may be essential for long-term survival, it also has risks and is not always easy. Outcrossing can temporarily disrupt efficient, highly specialized systems. This is especially so if the new genes – or new ideas – come from different cultures that had evolved different ways of solving problems or differ ways to communicate. The short-term impact of outcrossing is often instability, inefficiency, chaos, and rapid turnover. But the long-term benefits are clear – the infusion of new ideas and especially the emergence of new combinations formed from previously isolated adaptations. These processes are essential to ensure long-term innovation and adaptability.

We should also recognize that outcrossing can be difficult and even dangerous for the individuals involved. Newcomers can find it difficult to be accepted into a previously stable social system. Their ideas are often seen as disruptive, not fitting with the established way of doing things. Yet, we know that those new ideas are essential. Even if many turn out to be maladaptive mutations, they are still critical as the source of new creative ideas.

The Annual Meeting often seemed chaotic and was sometimes difficult, but the contributions of everyone are essential for the long-term growth of the CBSG. I am grateful to the many long-time CBSG members and supporters who attended the Annual Meeting and again offered us their energy, creativity, and wisdom. I want also to thank especially the people who were in Puntarenas for their first CBSG Meeting or maybe the first in a long time. Our discussions were enriched by the participation of Pao-Chung Chen and Hwa-Chin Lin from Taipei, Gerardo Ceballos of Mexico, Magaly Ojeda from Venezuela, Elsie Pérez from Cuba, Patricia Medici from Brazil, María Clara Domínguez from Colombia, Evan Blumer, David Reed, Steve Thompson, Joanne Earnhardt, and Elizabeth Lonsdorf from the USA, Kris Vehrs from the AZA, Kazu Takami and Kazuyoshi Itoh from Japan, and many, many more. We need your ideas and your energy and your challenges to our status quo. Please keep working with us and come back next year to our 2004 Annual Meeting in Taipei, and bring more new ideas and new people with you.

Sincerely,



Dr. Robert C. Lacy
CBSG Chairman



CBSG's Statement of Vitality

"CBSG cares about saving endangered species and habitat. It bases its mission and activities on the development and implementation of scientifically sound processes. CBSG takes a leadership position in the conservation community based on cross-cultural, interdisciplinary and inter-sector partnerships. CBSG champions openness, inclusiveness, morality, ethics and risk-taking. It constantly evolves in response to the needs of all those concerned with conserving the planet's biodiversity. It depends on the warmth, support, acceptance and vitality of its extended community."

CBSG News is published by the Conservation Breeding Specialist Group, Species Survival Commission, World Conservation Union. *CBSG News* is intended to inform CBSG members and other individuals and organizations concerned with the conservation of plants and animals of the activities of CBSG in particular and the conservation community in general. We are interested in exchanging newsletters and receiving notices of your meetings. Contributions of US \$35 to help defray cost of publication would be most appreciated. Please send contributions or news items to:

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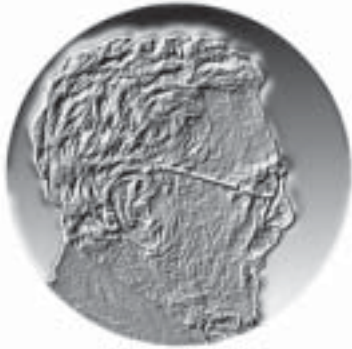
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Photo courtesy of Martin Villalta

Presentation of the First *Ulysses S. Seal Award for Innovation in Conservation*



When Ulie Seal passed away in March of 2003, the CBSG Steering Committee and Ulie's family wanted to do something to honor his legacy. Ulie's great passion and talent was his

creative thinking about how new science could be applied to solving the difficult problems of wildlife conservation. Moreover, his contributions were amplified many times over by his ability to recognize, encourage, and sometimes even exploit others who were also contributing to conservation in innovative ways. CBSG decided to honor Ulie by creating the *Ulysses S. Seal Award for Innovation in Conservation*.

CBSG solicited nominations for the first Ulysses Seal Award from the CBSG membership and from our Steering Committee. The CBSG Steering Committee chose a small sub-committee to review the nominations and to make a recommendation as to who should receive the honor. The sub-committee made a unanimous recommendation, and the Steering Committee enthusiastically endorsed the decision.

It gives CBSG great pleasure to announce that the first *Ulysses S. Seal Award for Innovation in Conservation* has been given to Nathan Flesness. As the executive director of the International Species Information System (ISIS), Nate has been the constant advocate and implementer of Ulie's vision. Many times over, Nate patiently explained to the zoo world that our animal collections had to be managed scientifically if they were to be properly cared for and protected, and that scientific care of the animals in the service of conservation would require that we treat our animal records as scientific data.

Without Ulie and Nate's vision and effort, zoos may not have created EEPs, SSPs and similar programs around the world. Or, if zoos had tried to develop such programs and hire scientists before the groundbreaking work of Nate and Ulie, we wouldn't have had any data with which to work. ISIS is now the custodian of records on more than 1.65 million animals of about 10,000 species. Nate's career has clearly embodied Ulie's commitment to conservation, Ulie's dedication to developing science, collecting data, and sharing knowledge, and Ulie's understanding that all of our efforts must be built on a foundation of nurturing good working relationships among people.

Nate also worked with Ulie and made contributions to CBSG outside of his role with ISIS. For example, Nate was a key participant in the first few CBSG PHVA workshops nearly 15 years ago, and he has often been a valued contributor while CBSG developed its tools. Nate was a valued colleague of Ulie's in many ways, and he continues to be an important contributor to the CBSG.



Nate Flesness and wife, Jan Eldridge

Nate received the bronze medallion bearing a profile of Ulie, at the closing ceremony of the CBSG Annual Meeting in San Jose, Costa Rica on 16 November 2003.

Ulie's daughter Rebecca recently sent a note of congratulations for Nate. In it, Rebecca stated, "Nate's dedication forms an immense pillar of support around which the dream of ISIS continues to be a living reality. His dedication extends to CBSG and the people who create it on a daily basis. He was steadfast in his support of Ulie, openly but quietly so in the last months, becoming a living dedication felt and appreciated by the whole family."

Nate was very gracious, and accepted the award with thanks for the support from the 15,000 or so professional zoological staff worldwide

that use ISIS software tools and data. He closed his acceptance speech with the following words.

"Ulie imagined better worlds, and taught us to cooperate to build them. For myself and for many of us, Ulie opened doors to a much wider world, and to careers with meaning. He was my major professional mentor, advisor, friend, nearly family... and of course he founded ISIS. For all these reasons it is an extra special honor for me to receive the Ulie Seal Award. Ulie was never one to rest on laurels, and he would want us to raise the bar, to go on brainstorming and holding workshops to further innovation, to do better than we have done. So, in closing, I challenge myself, and all of you, to find the next good idea, to find new ways to make a bigger contribution to keeping life on earth."



CBSG Processes Training

Group Participants: Frances Westley, Phil Miller, Kathy Traylor-Holzer, Yolan Friedmann, Anne Baker, Robert Lacy, David Reed, Bjarne Klausen, Miranda Stevenson, Susie Ellis, Sally Walker, Maria Clara Dominguez Vernaza, Patricia Medici

Rationale

As CBSG continues to grow and develop new processes and partnerships, the increased number of requests for workshops and other opportunities cannot all be handled by the core CBSG staff. We recognize the need for training of additional individuals in CBSG tools and processes to increase CBSG's abilities to meet this demand. An additional potential benefit of such training efforts could be an increase in the distribution of skills to people in other regions; this could take advantage of local knowledge, reduce travel costs and increase CBSG's image as an international organization.

Past training efforts have been relatively shallow, providing familiarity with the skills needed to conduct CBSG processes but not to the extent that trainees have been able to lead these processes on their own. We are not yet confident that trainees can go out unassisted and conduct those activities in which they have been trained. In many cases trainers just need some simple field-based practice to hone their skills; in other situations, they may not have the support of their institutions. We have not done a good job in the past of cultivating talent.

A shift is needed in our focus to training. We need to rethink and redesign training to increase recruitment and participation and make the trainees fully functional in these skills. This includes:

1. Targeting trainees for recruitment who are committed to become involved.
2. Identify the processes and skills that need to be taught and develop an effective training sequence.

The working group decided that a tiered approach to training is needed. Three levels of training were suggested:

1. Basic training (skills needed by all trainees)
2. Enriched training (particularly focused at the regional level)
3. Internships (for a very small group)

Recruitment strategy

We may decide to filter potential trainees based upon their potential to contribute to CBSG activities (a combination of aptitude, skills and/or commitment). Recruits could be science-based people interested in human dimension issues, or social science-based people that are sufficiently knowledgeable in the biological sciences. Different skills may be developed in different people, depending upon the role they intend to play. There are some basic skills (both science- and process-based) needed by all trainees. After this base level of training, trainees could receive more intensive training in specialty areas depending upon their expertise and areas of interest.

A proposed recruitment model is outlined below:

1. Identify some number of professionals (about 20?) interested in training and available for involvement with CBSG activities. One-half of these individuals should come from zoos or the conservation community and ideally have full institutional support for these activities. The other one-half should come from within the regions to be identified by the CBSG regional offices. These individuals would receive basic and enriched training. It is possible that some of these skills could be gained close to home as opposed to traveling to a CBSG training course (e.g., team-building, facilitation skills).
2. Train two people per year in internships that would enable the trainee to function in place of a CBSG staff person. These individuals would attend multiple workshops during their internships, and would commit to leading future workshops (e.g., two workshops per year for a five-year period).
3. Interns must be given responsibility in the workshop, but with considerable on-the-ground input from the trainer. This real world experience will be necessary to develop individuals that can effectively conduct workshops on their own.

Proposed format

The following training format is proposed:

1. A two-week course in Minneapolis to train the basic skills in all streams and to ensure

- understanding of the CBSG philosophy (workshop design, inclusiveness, report production, etc.).
2. Enriched courses to meet regional needs (potentially in the regions) and to take a select group of trainees forward to the “metaskills” level. At this level there may be different modules offered depending upon the entry skill base and whether the individual will primarily be a facilitator or modeler. Training needs currently differ among the regional offices.
 3. Internships for key individuals (two per year) to attend multiple workshops to be coached and gain experience while being mentored by experienced CBSG staff. Experience in a real workshop setting is essential to develop important risk communication and facilitation skills.

It is important to develop skilled teams in the CBSG regional offices so that they can handle requests without the assistance of the CBSG central office. We need to inventory the list of skills needed and work toward developing an entire set of skills within each region.

Funding strategy

The proposed training strategy will include a series of meetings, perhaps including a tools workshop. Frances Westley will write up a flow of steps in this process with estimated costs. Possible funding sources include foundation capacity building grants. We could submit a one-time funding package (e.g., to the MacArthur Foundation, CBSG Steering Committee, etc.). If this is done on a large scale, an additional person may be needed to coordinate this training effort. Another

funding option is to require that institutions (zoological institutions, conservation agencies, etc.) provide full support for their employees undergoing training, including participation in CBSG workshops, in exchange for the training that their staff receives. Other institutions could serve as sponsors for regional network trainees. An alternative strategy is to consider a market-based model vs a needs-based model: for example, CBSG could offer a training course in Minnesota for a fee to clients such as the USFWS and use the proceeds to fund training for other recruits.

Next steps toward training

This working group discussion should feed into a broader strategic direction discussion within CBSG. Depending upon the scope of this training initiative, it may be necessary to recruit an individual to lead this effort. A more detailed breakdown of training elements is needed, and the curriculum needs to be designed. Partnerships should be pursued for both design and delivery. A recruitment strategy needs to be chosen and funding support determined.

Perhaps the best first step is to focus on the CBSG regional offices to increase their skills and decrease their dependence upon the core CBSG staff. We need to consult with the regional offices to identify their training needs and the individuals to receive training; then we need to identify funding/sponsors to make this happen.



Zoo Biology Training

Group Participants: Kathy Traylor-Holzer, Karin Schwartz, Cheryl Asa, David Wildt, Duncan Bolton, Paul Scobie, Anne Baker, Frands Carlsen

Problem definition

This working group met to discuss how CBSG could act as a catalyst for facilitating professional development and training in zoo biology for zoos/aquariums in regions with little access to such programs. The group discussion focused on necessary tasks that needed to be addressed, such as the processes for identifying regional training needs, identifying sources of trainers, and developing the strategy for coordination of training efforts.

The need for training in various zoo biology disciplines was discussed in relation to the regions of the world that could use some assistance. The group looked at ISIS membership distribution as one parameter to determine regions that may need training programs.

The total number of institutions within each region has not been determined and thus there is no clear indication of the percentage of institutions that are members. It is clear, however, that participation is low in the Mesoamerica and S. American regions as well as the E and S Asia region. Although the numbers for Australasia are similar to that of E and S Asia, the Australasian participation is actually fairly high as there are a smaller total number of institutions in that region.

The main obstacles for expanding ISIS membership were identified as:

- Reluctance/inability to pay for ISIS membership
- Limited access to computer systems to support ISIS software
- Cultural differences
- Language differences
- Limited access to training programs
- High turnover rate of zoo staff

Strategy development

This working group reviewed a document that was developed in 2000 as part of a CBSG strategic plan entitled “*Catalyzing long-term development of zoo-based conservation capacity through information and technology transfer*”. The CBSG Steering Committee had at that time discussed the possibilities of facilitating zoo biology training programs but this plan was never implemented. This working group used this document as a guide for developing the strategy for coordination of efforts by CBSG to promote global professional development.

CBSG is an appropriate organization to coordinate zoo biology training programs because:

- CBSG has an extensive network that includes experts with specialties in wide-ranging skills from population management to landscape assessment. Experts have been instrumental in offering training for single workshop assessments (CAMPs, PHVAs).
- CBSG can be the catalyst for training in-country people who ultimately are the ones responsible for conservation in their own country.
- CBSG and its regional offices have conducted a wide variety of training courses including training in population management, studbooks, husbandry, veterinary care, disease risk and population risk assessment that have begun to have local community impacts.
- CBSG can be influential and effective at facilitating technology transfer. This is a major contribution that could theoretically occur without a major cost (personnel or financial) to the organization itself. This can occur largely because the zoo network already employs many potential trainers.

The training approach would be as follows:

- Use CBSG and its regional networks as primary point centers to identify target audiences for training (along with regional zoo associations where appropriate).
- Generate a database of past and existing training programs and identify successes, failures and gaps.
- Generate a database of people in the network that would be willing to be part of the capacity building activities (have support from their own institution).

- Tools and concepts explained through different levels would include conceptual as well as follow-up practical experience and mentoring.
- Tools and concepts would be explained through multiple languages.
- Tools and concepts would be taught to local trainers who can train others in their region.
- A monitoring function would be put in place to ensure that capacity building is successful through evaluation and follow-up.
- Improved communication and formalized system would be developed for linking those regions with a training need with training teams.

There will be three main components to this system:

Component 1: CBSG Main office

CBSG staff member Kathy Traylor-Holzer would be the point person responsible for training within the CBSG office. She would be responsible for:

- Linking with regional CBSG networks and regional zoo associations regarding training needs in their regions.
- Developing/investigating strategic alliances with organizations that are developing or have developed training.
- Evaluating past training efforts to develop a more effective training strategy.
- Evaluating the impact of CBSG zoo-based training activities.



Areas of priority for training would be identified through CBSG regional networks and regional zoo associations. Expertise (people) would be identified and incorporated into a database.

Component 2: CBSG Regional Offices

Each CBSG regional officer would:

- Identify training needs within each region.
- Identify expertise (people) within each region and incorporate into a trainer database.
- Find funding to assist in training in cooperation with CBSG office.

Component 3: CBSG Expertise Network

Interested network members would:

- Agree to participate in specific tasks, including contributing their time.
- Provide teaching materials and give up ownership for use in the broader community.
- Ensure support (both financial and logistical) from home institution.
- Agree to create a standard set of tools for training for each discipline (a template).
- Agree to offer follow-up mentoring support.

The timetable for the development of this CBSG-coordinated training process would be as follows:

- Links with CBSG regional offices and regional zoo associations for collection of information on regional training needs will be made in early 2004.
- Information on existing training programs as well as regional needs will be compiled before the next CBSG meeting in October 2004.
- A list of experts as recommended by CBSG regional offices and regional zoo associations will be compiled by October 2004.

The working group endorsed the idea of a Training Summit involving relevant stakeholders as proposed in the 2000 strategic plan. This summit could possibly be held just prior to the annual CBSG meeting in October 2004. The purpose of such a summit would be to develop a strategic, collaborative approach to capacity building and technology

transfer in the zoo conservation community, especially at the regional level. The outcomes of the summit would be reported at the next CBSG annual meeting.

Zoos and aquariums make significant contributions to global conservation efforts through education, propagation of protected species, participation in conservation management programs, collaborative efforts in *ex situ* and *in situ* research, and other areas of wildlife management. CBSG is in a position to be able to assist collaborative efforts by coordinating zoo biology training in regions of the world that need assistance. This coordination would entail identifying gaps in training and linking those that need assistance with those that can provide the professional development programs.



Collection of Animals from the Wild

Group Participants: Bart Hiddinga, Christian Schmidt, Suzanne Gendron, Jorge Rodriguez, Jansen Manansang, Ivan Rehak, Lin Hwa-ching, Shawn Peng, Chen Pao-ching, Ludwig Müller, Willie Labuschagne, Alex Rübel, Steve Thompson, Simon Tonge, Charlie Hoessle, Dave Morgan, Jonathan Wilcken, Bruce Bohmke, Bjarne Klausen

Discussions began with identification of the problem.

1. Can zoos and aquaria maintain their collections through cooperative management of species without recourse to supplementation from the wild?
2. Is this process taxon dependent?

Two facets were identified:

1. When, why and how do zoological institutes obtain animals from the wild?
2. How do we address the public perception that zoological institutes obtain most of their animals from the wild and therefore are major contributors to the loss of biodiversity though this was not found to be consistent throughout all regions?

Additions to zoological collections were deemed justifiable for threatened species as per IUCN technical guidelines on the management of *ex-situ* populations for conservation. Since the IUCN guidelines cover threatened species, guidelines for non-threatened species were considered.

Non-threatened taxa have been obtained for the following reasons:

- Educational use
- Expansion of collection diversity
- Research modeling
- Genetic diversity
- Rescue and rehabilitation
- Other unsolicited donations

Consideration for wild acquisitions

Are the animals needed?

1. Is it in the institutional collection plan (education, research, conservation justification)?

2. Does the existing *ex-situ* population need supplementation (genetic or demographic reasons)?
3. Are the animals considered for collection genetically appropriate?

Where do the animals come from?

1. Are they available from other bona fide institutions/regions/breeders/agencies?
2. Logistics of the moves from other facilities
3. Is it better to take from a sustainable wild source versus trading with other facilities?

Need to take from wild

1. Is it sustainable to collect?
 - i) Base take on good population biology data
2. Is it ethical?
 - ii) Culturally appropriate?
 - iii) Welfare not unduly compromised?
3. Are the agencies collecting from the wild with these guidelines in mind?

Recommendations

Institutional collection plans should be underpinned by regional collection plans and justified by educational, research and/or conservation objectives.

Regional associations are encouraged to evaluate dependence on wild-caught animals in all taxa and to incorporate into regional collection plans guidelines on the use of non-threatened species.

All major zoo and aquarium associations recognize the legitimate need to obtain animals from the wild occasionally.

Zoos and aquaria should not imply in their communications internal or external, that all of their animals are captive-born. 🦋



National and International Regulations and their Impact on Conservation Efforts

Group Participants: Thomas Althaus, Brad Andrews, Suzanne Boardman, Onnie Byers, Bengt Holst, Lena M Linden, Yolanda Matamoros, Arnulf Müller-Helmbrecht, Lee Simmons, Gloria Svampa-Garibaldi, Kris Vehrs

At the 2002 CBSG Annual Meeting in Vienna last fall, a large working group was convened to discuss issues surrounding the fact that legislation developed to assist conservation are negatively affecting zoos' conservation efforts. That group determined that the problem needed to be very explicitly defined and Bill Conway accepted the responsibility to draft this problem statement. The next step was to bring the problem statement to a meeting held in Berne, Switzerland in May 2003 where the statement was adopted, a process for completion of the problem statement was outlined; and consensus was reached on the next steps to take to move this initiative forward.

At this year's CBSG Annual Meeting, the Legislation Working Group discussed the documentation prepared to date, and concluded that, in addition to the longer, more detailed problem statement, a short, positive *Written Statement* of the problems the zoo community faces with CITES implementation and with current and proposed resolutions was needed. After wide review from the zoo community, this *Written Statement* will be submitted to the CITES Animal Committee, and the world's zoos should be prepared to defend the document.


Consideration was given to the formulation of a draft Resolution regarding "rapid delivery of permits for live

animals in endangered breeding programs, and their biological samples: acknowledging that animals in captive breeding programs should be treated differently". Further advice is to be taken on this issue.

Regarding problem resolutions (both current and proposed) it was agreed that a *Resolutions Library* would be established and made available to those working on these issues to facilitate discussion within the zoo community.

The working group acknowledged that the zoo community was a very small CITES user group, and one that does not have major representation on the Animal Committee or at the Conference of the Parties (COP). It was concluded that more zoo representatives should attend both events, and become more active in their national Scientific Authorities.

It is now clear that a combined strategy is called for, providing a unified approach from zoos worldwide, with support documentation made available to zoo representatives. There are misconceptions and lack of understanding outside the zoo community regarding issues associated with *ex situ* conservation/captive breeding. The new "World Zoo and Aquarium Conservation Strategy" (WZACS) will be a major step in rectifying such misunderstandings, and the Legislation Working Group proposed that there should be a formal launch of the WZACS at the next COP.

It was agreed that a *Written Statement* and *Resolutions Library* would be prepared by early 2004. Requests for invitations to the Animals Committee, and consideration of attendance at the COP must be completed by March 2004. All interested zoo representatives are encouraged to participate and make their voices heard. 

2004 ANNUAL MEETINGS Taipei, Taiwan

CBSG
29-31 October 2004



Hosted by Taipei Zoo



<http://www.zoo.gov.tw/cbsg&waza>

WAZA
31 October - 4 November



International Animal Data Information Systems Committee

Group Participants: Bruce Bohmke, Duncan Bolton, Jeffrey Bonner, Dan Brands, Frands Carlsen, Sue DuBois, Nate Flesness, Jo Gipps, Kazuyoshi Itoh, Dennis Meritt, Magaly Ojeda, Mark Stanley Price, Radoslaw Ratajszczak, Karin Schwartz, Beth Stevens, Kazutoshi Takami, Eric Tsao, Dave Wildt

The International Animal Data Information Systems Committee (IADISC), www.iadisc.org, serves as a global forum for the user community's participation in the planning, design, development, and deployment of a new Zoological Information Management System (ZIMS), www.zims.org. The ZIMS Project was initiated in 2001 by the user community and ISIS to address the need for an improved global animal information system and is currently managed by ISIS.

IADISC was established in 2001 to ensure international user representation in the process throughout the building of ZIMS. The most recent annual meeting was held November 12-13, 2003 in Costa Rica. This particular meeting was important in defining the specific responsibilities that IADISC has in supporting the ZIMS Project.

ZIMS project update

In Phase I of the ZIMS Project, a high-level plan, mission and charter defining the scope of ZIMS and development cost estimate were created. In Phase II, an RFP (Request for Proposals) was developed with detailed description core and veterinary system requirements. In July 2003, ISIS hired a full-time ZIMS Project Manager and Chief Technology Officer, Syed Hassan. Subsequently, the RFP for ZIMS development was released in September 2003. An international evaluation committee is currently reviewing proposals from 9 vendors. The selected vendor will begin design and development of ZIMS in early 2004. The ZIMS capital campaign has so far raised over \$3 million in pledges from more than 100 institutions for the first phase of ZIMS development (core and veterinary to replace ARKS, SPARKS and

MedARKS) and has plans to broaden the campaign to corporate and foundation sources.

The initial high-level estimate for the completion of ZIMS, including several modules beyond this Phase 1, was roughly \$26 million. Phase 1 was estimated at \$10 million. It is important to note that a significant portion of this estimate includes the cost for professional documentation, preparation of sophisticated materials needed by the software vendor, and for 'consensus adjustment'. Consensus adjustment represents the cost for gaining agreement on how the system is designed, particularly since it may result in changes to business processes and will absolutely require the review and development of new data standards. This will require many workshops. Because much of this work must be performed by the users of the system, IADISC will play an important role in facilitating user involvement, engaging new stakeholders in the process and communication project and system progress. Thus, a large part of the cost for consensus adjustment will be offset by the volunteer efforts of IADISC, workshop participants and their institutions. The ISIS Board is addressing ways to meet the operational costs for supporting ZIMS that were not included in the development estimate.


Role of IADISC

The role of IADISC includes:

- Promoting and coordinating the involvement of Subject Matter Experts in the ZIMS design workshops and standards workshops.
- Promoting Data Quality – though this will be primarily done by regional ADISCs.
- Increasing global representation.
- Supporting the implementation of ZIMS by:
 - Communicating project activities and progress to the user community.
 - Ensuring that regional training needs are defined and addressed.
 - Helping users adapt to changing business processes.
- Facilitating user acceptance testing of ZIMS.

Diverse and equitable representation from all regions of the world has been a primary objective of IADISC and it will continue to seek contacts in new regions both for membership in IADISC and participation in workshops.

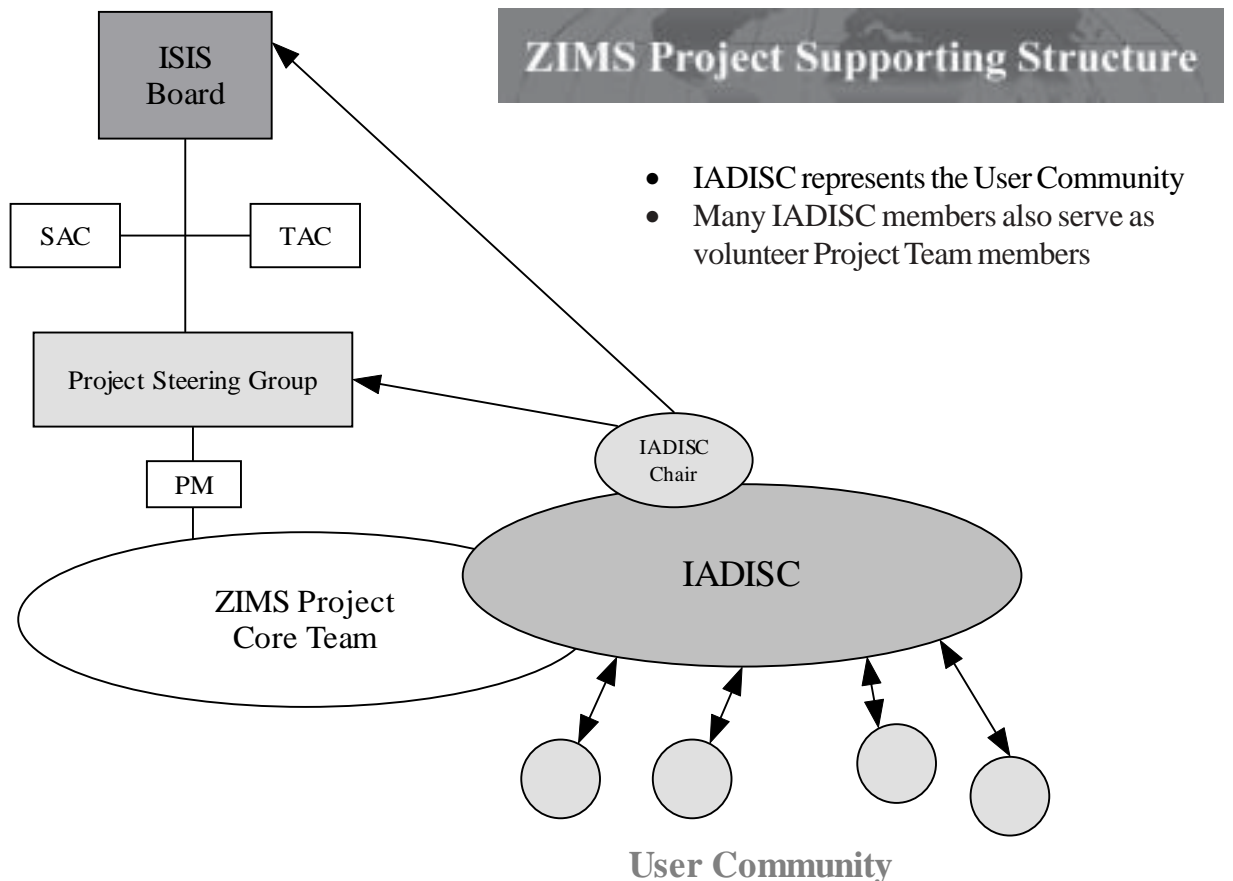
In 2004, Subject Matter Experts will be needed for 4-8 design sessions with the vendor for both core and veterinary development. In addition, 12-20 standards workshops will be necessary to address the many categories identified needing standardization for both core and veterinary data. IADISC members will be seeking Subject Matter Experts in their respective regions that fit a specific list of criteria. An initial list is already in progress.

reviewed and endorsed by IADISC at the Costa Rica meeting. The discussion of a standards development process is very important and has not been done before. This is essential as the basis for the software development process. We are also developing, testing and formalizing new organizational structures (such as IADISC) and their interactions and roles. 

Preliminary workshop venues are being explored where the most cost-effective participation can be achieved. Subject Matter Experts will include stakeholders and experts external to zoological institutions to ensure that the design and standards have extended value.

Data standards process

A proposed process drafted by ZIMS Project team members (for developing data standards) was

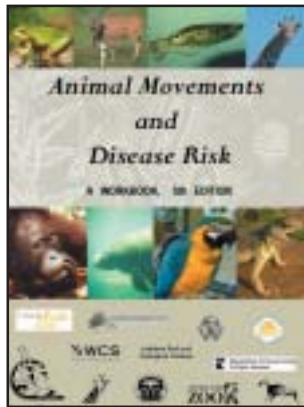


Disease Risk Assessment

Group Participants: Bob Lacy, Eric Miller, Phil Miller, Dave Reed, Lee Simmons, John Williams

Overall questions to ponder

- Do we want to continue with this project?
- If so, do we want to add new tools to the existing toolbox, or do we first want to focus on developing case studies to apply and test the tools?

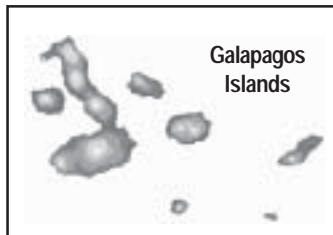


We agree that continuing the project is a good idea. With this in mind, the group recognized that the CBSG Disease Risk Assessment Team has put together a good workbook but has not yet consistently put the tools into practice within the conservation community. It is therefore important that we come up with a few cases in order to more fully test and distribute the risk assessment tools.

Potential workshop applications

1. Malaria and West Nile virus in selected species in the Galapagos

Would want to use this as a case to test the impact of disease on species dynamics? The intended outcome of the workshop would be the statement of a protocol



on how to detect malaria and WNV among Galapagos wildlife populations (primarily birds) and how to respond appropriately. St. Louis Zoo is currently involved in data gathering in the area and Eric Miller sees them as a key player in the creation of this case. Some people that should be invited to collaborate on this project include:

- Charles Darwin Research Station and Galapagos National Park

- Patti Parker and Bob Ricklefs, U. Missouri – St. Louis
- St. Louis Zoo veterinary staff
- Mike Cranfield, Baltimore
- Jonna Mazet, U. California – Davis / Wildlife Health Center
- Joe Flanagan
- ZSL representative
- Bran Richey
- Patti Bright

We initially envision an intensive working group activity at the upcoming Galapagos penguin PHVA workshop. This initial work could serve as the basis for a greatly expanded DRA workshop at a later date.

2. Madagascar

There is a very good potential for excellent work in Madagascar through research efforts guided by zoos in St. Louis and Omaha. Among the more interesting application could be the study of chytrid fungus and its threat to Malagasy amphibians. At this point, chytrid fungus has not been shown to be a factor in amphibian declines on the island. We don't know if the fungus is truly absent due to some other factor, or if it's simply great luck that it has not yet been introduced onto the island. If the latter hypothesis is true, there is a huge risk for amphibian impacts on Madagascar.



There are other data being collected on many Malagasy species within National Parks. This dataset could be an excellent starting point for developing risk assessment models for species such as lemurs.

3. Tuberculosis in Kruger National Park

Significant risk of transmission of TB among commercial game ranches and local wildlife populations. There has been a lot of data collection on local wildlife population



dynamics and disease dynamics, making this an excellent opportunity for analysis.

Omaha Zoo's Naida Luskutoff has significant experience in this area, and Yolana Friedmann (CBSG Southern Africa / EWT) has many connections throughout the southern Africa wildlife research and management community. Yolana has already expressed enthusiasm about moving this project forward, and members of this group will be able to communicate with Naida over the next week.

4. Measles in mountain gorillas

The relationship between ecotourism dynamics, disease in local human populations, and mountain gorilla population biology is highly complex. In an earlier Disease Risk Assessment workshop, members of the DRA Team began sketching out a STELLA-based model of the gorillas – humans – measles system, so we are already on the way to sophisticated analysis of the disease system.



Mike Cranfield and Laura Hungerford can work to move this forward, with assistance from staff at the Johns Hopkins Tropical Health program.

5. Tuberculosis in Riding Mountain National Park

The movement of TB between domestic and wild ungulates in Riding Mountain National Park is a highly complex system with great implications across wildlife and domestic animal management domains. A recent CBSG Disease Risk Assessment workshop laid some excellent groundwork through collaboration with biologists from Parks Canada and the Canadian Wildlife Service.



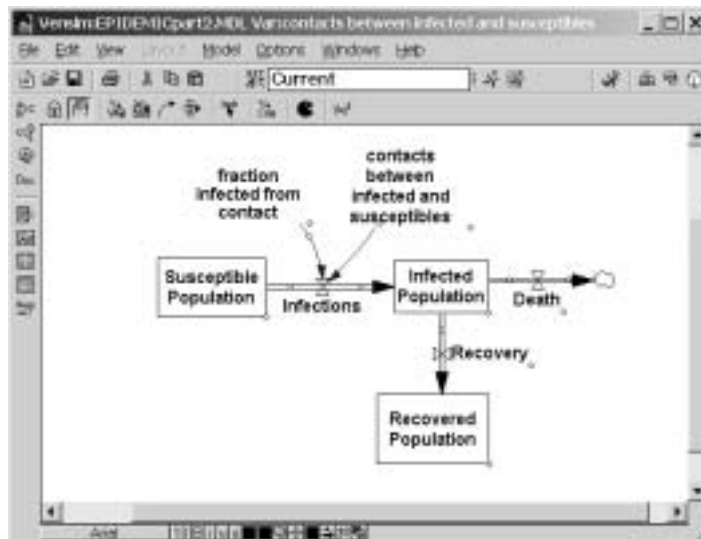
Bob Lacy is prepared to pursue the continuation of this project with Parks Canada's Stephen Woodley.

6. Black Rhino reintroduction, Ngorongoro Crater

Recent actual reintroduction effort of rhinos into the Crater allows us to again retrospectively test some of our tools on an existing system.



Eric Miller from St. Louis has the background information and can drive the development of this case study.



Learning from Efforts to Incorporate the Human Dimension in Wildlife Conservation

Group Participants: Amy Camacho, Elsie Perez, Andrea Brene, Soto, Jesus Pacheco Rodriguez, Gerardo Ceballos, Simon Hicks, John Williams, Maria Clara Domínguez, Claudio Alejandro Quagliata, Paul Pearce-Kelly

Introduction

Given the magnitude and complexity of human dimension-related issues, the group attempted to identify the key problem areas and actions that CBSG could take to enhance its tools and processes (PHVAs, CAMPs and project design approach).

Problem statement

There is a limited accessibility and exposure to the available products, processes, and tools (including those of CBSG) for stakeholders to realize effective conservation.

How can we integrate CBSG tools with other available conservation tools – as they pertain to the human dimension?


Principle hindrances

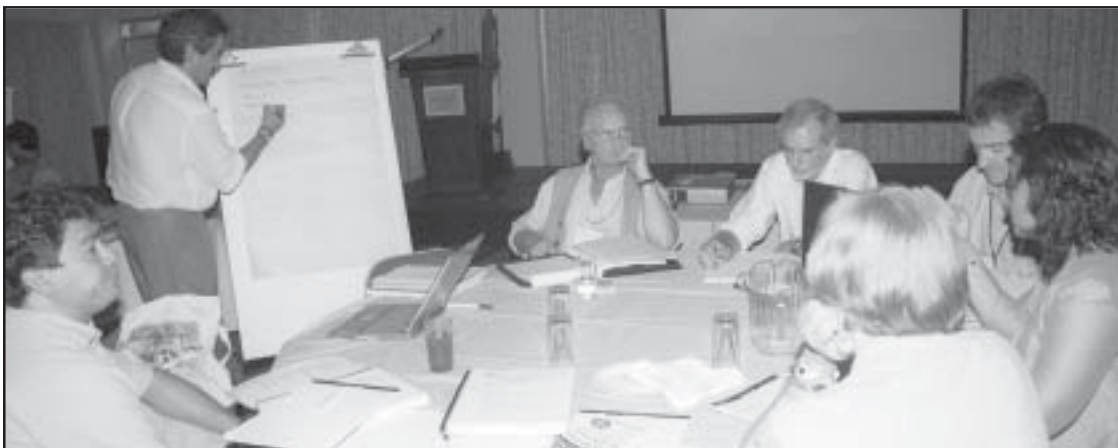
- Communication (e.g. lack of awareness of other tools/data)
- Language
- Insufficient representation (including level of participatory input to the model output)

- Cost constraints
- Better incorporation/integration of human resource use dynamics (and related influences) in conservation planning tools and models
- Better team work
- Lack of awareness
- Difficult access to tools
- Lack of follow up (including support, training etc)
- Overly complicated tools/methods/models
- Limited research input by local communities

What we can do to improve matters

- Maximize representation in existing process and use of tools currently available
- Develop wider range of working partnerships (NGOs, governmental agencies)
- Strengthen efforts to make results available to locals
- Translate workshop and results to the local language of the range countries
- Actively promote the available products
- Put “the cause” first
- Talk about what we are doing every time we get the chance
- Widely distribute papers on new tools available
- Improved and continual evaluation needed to ensure the human dimension is incorporated
- Follow up CBSG recommendation to optimize the alliance with local communities and enhance their role and power

The importance of effectively involving all community stakeholders in key biodiversity areas was recognized and appreciated. 



Reintroduction of Confiscated Animals

Group Participants: Joanne Earnhardt, Dan Brands, Dave Morgan, Radoslav Ratajszvak, Jorge Rodriguez, Randall Arguedas, Lee Simons, Ludwig Müller, Charlie Hoessle, Pavel Moucha, Ivan Rehak, Bohumil Kral, Jansen Manansang, Lin Hwa-Ching, Bjarne Klausen, Magaly Ojeda, Frands Carlsen, Simon Tonge, Bart Hiddinga

Guidelines for reintroduction and placement of confiscated animals exist, but they often discourage reintroductions. In this working group, we tried to focus on reintroductions of confiscated animals. What makes confiscated animals different from captive-bred are that they sometimes come directly from the wild and can, if the origin is known, be transferred directly to the wild with no introduction.

Problems associated with accepting confiscated animals


- Authorities lack capacity to maintain/handle confiscations
- Animals dumped in zoos become an resource/economic burden – compromise space
- Confiscations could be a valuable resource for zoo/scientific research (not being used).
- Lack of information flow
- Zoo are often prevented by authorities to do proper management care
- Bad public relations for zoo if they do not accept confiscated animals and also if mortalities occur
- Health risk to existing collection
- Inconsistency of procedures internationally
- Failure of authorities to assume responsibility long- and short-term



Problems associated release of confiscated animals

- Lack of knowledge of status and genetics of individuals
- Disease factors/risk
- Costs
- Lack of knowledge of origin of the individuals
- Lack of knowledge of social implications in the existing populations (population impact)
- Habitat/carrying capacity
- Welfare – captive habituation – medical examination
- Pre/post monitoring problems
- Failure of authorities to assume responsibility long and short term
- No global database on confiscations (numbers, species)
- Confiscations sent to sanctuaries often represent conservation resource competition which is not contributing to conservation

Recommendations

1. Establish a central data repository on scope of confiscations within regions, and a WAZA/CBSG task force on data standards.
2. Confiscations should be immediately and permanently identified.
3. Research on post-release of confiscated animals – prioritize capacity.
4. Design a WAZA/CBSG public relations campaign on confiscations.
5. Include confiscation as an agenda item at CIRCC/WAZA meeting.
6. Give priority to placement of confiscated animals in established breeding programs. 



Conservation Project Evaluation

Group participants: Bengt Holst, Suzanne Gendron, Susie Boardman, Olivia Walter, Evan Blumer, Mark Stanley Price, Lena Marie Linden, Eric Tsao, Bruce Bohmke, Bryan Carroll, Elizabeth Lonsdorf, Beth Stevens, Simon Hicks

Goals

The goals of this working group were to get a general understanding of the concept of evaluation, agree on a practical approach to assess projects through their life cycle, and agree on follow through.

Expected output

The expected output was a checklist of issues to consider when evaluating conservation projects. This checklist can then be transformed into an actual evaluation form that can be used to

1. To select conservation projects (prioritizing the projects);
2. To assess the outcome of conservation projects at different stages:
 - a) to measure success
 - b) to gain experience

Definition

Evaluation was defined as the measurement of cost and effect and success and failure. In addition, it must be conducted against defined goals and it must allow cross comparison with other projects.

Unit of evaluation

The Project is the building block. We have to differ between activity and impact. We want to measure impact, but much too often assess activity. But we also have to realize that the impact of conservation activities is often not quantitatively measurable.

There are already many evaluation tools in use. LOGFRAME is one of them and is often used. We need common definitions of the terms used in the evaluation tools in order to have common ground in the evaluation process.

In order to make evaluations useful we need clear defined objectives that can be assessed. Many existing conservation projects lack such clear defined objectives. If these projects are to be evaluated, such objectives must be identified from the existing project outline prior to evaluation.

In addition to an actual evaluation there is a current need for review of the project with possible change of goals, objectives and methods.

Topics to consider

There is a need for two different checklists:

1. A list for *how to choose* between different projects (Prediction of Success)
2. A list for the question: *was the project successful?*

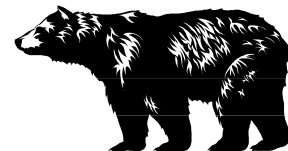
1. How to choose: checklist

Conservation Impact

- Cutting edge?
- Cost vs. benefits
- Other impacts
- Socio-economic benefits
- Scientific, research, education merit
- Publications and dissemination
- Capacity development

Quality of project proposal

- Lessons learnt
- Evaluation process
- Quality of design
- Measurable outcomes
- Definition of the issues
- Assumptions
- Relationship with other projects



Politics

- Social, economic, development impacts – local and sustainable
- Public perception issues/donor perception
- Legal and ethical compliance
 - Animal welfare
- Partnerships
- Feasibility and risk
- In-country politics

Finance

- Feasibility and risk
- Appropriate budget
- Co-funders

Personnel/Institutional

- Qualifications of principal investigator (PI)
- Capacity to manage
 - Track record

2. Was it successful: checklist

First, review performance against stated objectives

Project design

- Consider relationship with other projects
- Assumptions
- Lessons learnt
- If none then develop clear objectives

Conservation Impact

- Cutting edge?
- Cost vs. benefits
- Other impacts
- Socio-economic benefits
- Scientific, research, education merit
- Publications and dissemination
- Capacity development

Politics

- Social, economic, development impacts – local and sustainable
- Public perception issues/donor perception
- Legal and ethical compliance
 - Animal welfare
- Partnerships
- Feasibility and risk
- In-country politics



Finance

- Feasibility and risk
- Appropriate budget
- Co-funders

Personnel/Institutional

- Qualifications of principal investigator (PI)
- Capacity to manage
 - Track record
 - Interpersonal issues

Recommendations

Overall, first, we need to refine and develop the process. One way is to test the tool on existing conservation project data. CBSG Europe will be responsible for doing this using the EAZA Conservation Database. Secondly, we need to develop standard definitions of the terminology used, and finally, we need to adapt existing conservation databases according to the evaluation checklists when these have been tested.



Transponders

Group participants: Olivia Walter, Danilo Leandro, Randal Arguedas, Pavel Moucha, Paul Scobie, Bryan Carroll, Evan Blumer, Radoslaw Ratojszrzah, Eric Miller, Chris West

Background

In the late 1980s it was recognized by the zoo community that marking/tagging systems for individual identifications were not always reliable. By that time, individual implantable transponder chips (also known as PIT tags) were being used in a number of zoos. Several manufacturers were developing systems that were not compatible with each other. In 1989 a CBSG Task Force was set up to look at all the different systems and decide which CBSG should recommend. It was very clear that there was a lot of confusion and disinformation being given to customers and that the manufacturers did not intend to produce transponder chips that were compatible with readers produced by other manufacturers at the time.

Parameters such as permanent/unalterable and unique codes, cost, read distance, product compatibility with new developments and others on the market, product availability, and practical usability of chips and readers were looked at. A recommendation to use the Trovan system was made.

Since then more technology has been made available. With the development of ISO standards, manufacturers agreed to develop compatible systems, new legislation has come into force, and lawsuits between manufacturers are ongoing. The 2003 CBSG Annual Meeting in Costa Rica was the third workshop where transponders were discussed. Although all participants would like to resolve the issue once and for all, it was very clear that the situation with transponders needs to be reviewed periodically.

Current issues

There are problems in North America with an ongoing lawsuit, which means collections are not allowed to use the Trovan applicator. The use of Trovan transponders is recommended where possible in North America.

Legislation introduced in the European Union (Regulation (EC) 338/97) requires that species listed under Annex A (mainly CITES Appendix I species) must be identified with a closed ring or a transponder that complies with ISO standards 11784:1996 and 11785:1996. Trovan ID100s do not comply with both standards and hence can no longer be used for Annex A specimens.

ISO Standards

Standard 11784 is concerned with the structure of the unique identifying code of each chip.

Standard 11785 is concerned with a system in which transponders can be read by one scanner irrespective of frequency or type. At least one existing manufacturer produces a scanner that will read both ISO compliant transponder chips and the Trovan ID100.

Re-use of chips

In some parts of the world reuse of chips is driven by cost and availability. Duplication of chip numbers through re-use is already a problem that ZIMS will have to cope with.

Workshop recommendations

1. *CBSG recommends using a transponder system that is ISO compliant and also be able to read previously recommended chips.*
2. *Re-use of chips is strongly discouraged, particularly if the animals that receive re-used chips are entered in the ISIS global dataset.*

The recommendation above has been made not knowing whether or when ISO chips will be available to all regions. It is also an ongoing issue that new technology will continue to be developed; regulations will change; and disputes on patents will also continue.

Recommended actions

- regional feedback on availability of ISO chips
- feedback on the re-use of chips
- constraints (availability, cost, legal etc) on using any type of chip
- suggest the possibility of group buying within a region, or for the region to negotiate prices directly with the manufacturers

It was suggested that actions be coordinated by CIRCC.



World Zoo and Aquarium Conservation Strategy Progress

During the CBSG meeting in Costa Rica a working group reviewed the draft WZACS documents that had been sent out for review in advance of the WAZA meeting. This work was continued at the WAZA meeting following the CBSG meeting.

The document was felt to be in remarkable shape but obviously would need a considerable amount of editing to pull it into a more cohesive format. All authors and collaborators are to be congratulated in getting such excellent work done on time. The central point for the whole document was felt to be that *'all animals in collections and in the wild are in our care because their existence depends on our actions and we are the only life form that can influence all other life on the planet'*.

The vision of the document was slightly modified to read: *We, as a community of zoos, are an increasingly vital force for world-wide conservation, because we keep and care for living things; serve and involve vast numbers of people, many of whom are disconnected from nature; invest ourselves in unprecedented global partnerships; reach out from our home communities to wild places around the world; and foster experience and expertise. In achieving our potential we will be EFFECTIVE, RECOGNISED and TRUSTED.*

It is important to remember that this is a strategy for the future and that it can only succeed if put into action. The document must drive an action planning process. Therefore action planning workshops need to take place as soon after its publication as possible. WAZA must provide the lead in this, but the regional and national zoo associations are

critical in translating these actions to regional and institutional levels. To help this process each Chapter will have a summary of a series of objectives which can be used to formulate action plans.

It is essential that the document be reviewed by as many external reviewers, from all regions, as possible. After the meeting the document was sent out to additional reviewers, including ones from non-zoo conservation-based organizations. The deadline given was mid-January 2004 and Mr Kasutoshi offered to have it translated into Japanese to get more comments from the Japanese community; he was given until the end of January for this task.

There were discussions on some of the terminology, particularly the terms *captive* (which has different implications in different cultures) and *in* and *ex situ* (which many find confusing). A working group was set up under the leadership of Mark Stanley Price to help resolve these, and the editor will apply the resulting decisions.

Groups worked through all of the chapters making comments, which will be taken on board by the editor Peter Olney.

Many of the key zoo people will be attending the Catalysts for Conservation meeting in London in February. It is intended to have a group meeting around the time of this meeting in London to further discuss the WZACS and review feedback.



CBSG South Asia Successes



CBSG, South Asia is one of a suite of well-organized “networks” hosted and administered by Zoo Outreach Organisation (Z.O.O.) and Wildlife Information Liaison Development (W.I.L.D.) Society. However, the IUCN SSC Conservation Breeding Specialist Group, to which the CBSG, South Asia Regional Network owes its name and many of its tools and talents, is the most influential of these networks. CBSG’s mandate, techniques, processes, philosophy and vitality create a framework around which all of our networks operate synchronistically and systematically.

Within the context of CBSG and a variety of taxon-based networks we carry out projects involving intensive networking, workshops, field training, field studies related to recommendations and future CAMPs, and finally education, awareness and lobbying. These elements work their way into everything we do, everywhere we go.



A major challenge for CBSG South Asia this year was to help IUCN Pakistan organize their first Red Listing exercise. This involved a year and half of planning which included very tense moments wondering whether we, coming

from India, would be able to get a visa for Pakistan. We had been tasked to help the Biodiversity section of IUCN Pakistan organize and conduct a Mammal CAMP. Pakistan is the only country that had not been able to send a participant to any of our CAMPs or training so far. Our first priority was to give some exposure to the Head of their Biodiversity Section, Dr. Kashif Sheikh, to the CAMP process. An opportunity for this could be availed during a CAMP training we conducted in Bangladesh for some of the invertebrate biologists of their country through the auspices of the

South Asian Invertebrate Specialist Group, which is based in our office, and the IUCN Bangladesh Red List Program. Kashif was sponsored to the training by the Regional Biodiversity Programme, Asia and CBSG South Asia. The time we could spend with him in addition to the training provided the insight required for us to prepare our part of the workshop, which was scheduled in August of 2003.

Kashif and his team at the IUCN Pakistan Biodiversity Programme did an excellent job of preparing for the CAMP. In CBSG South Asia we send out two-page Biological Information Sheets to collect basic information before the CAMP from potential participants who have studied target species. Kashif had done a wonderful job of motivating people to send in the sheets. This proved extremely useful in the instance of participants who could not come or were unable to stay the entire time.

Pakistan is rich in mountain ungulates as well as in mountain ungulate biologists. There were so many, we could form two working groups just for these specialists. Like many countries in South Asia,




Pakistan has large gaps in information even in mammals with both volant and non-volant small mammals heading the list. There was a reasonable amount of published information on non-volant small mammals, which have been studied by some non-native specialists, so a working group could be formed. Volant mammals, or bats, which made up 47 out of the 187 mammals of Pakistan were much more difficult. It was here that our South Asian Regional workshops came to be very useful indeed. We had information for many Pakistan bats in the South Asian Chiroptera CAMP Report, which had been taken from literature and also extrapolated from range estimates in other countries. We were able to use the services of some local university students to go through the report and extract appropriate information and induct people knowledgeable about habitat for comment. Also participants gave input regarding attitudes, and other factors.

CBSG South Asia Chiroptera network experience came to be very useful in other ways also. Guests and participants of the inaugural session were fascinated by the CAMP presentation that used bats as a case study. Most of them had not realized the utility or diversity of bats before and were interested to know more. We distributed Bat CAMP Summary booklets and held many discussions. In the end a few participants indicated that they would like to take up bat studies in various parts of Pakistan and formed a “bat group”. We promised that if they could double the size of their group to 12 persons, we would arrange a Field Techniques Training Workshop in Pakistan in 2004, along the same lines as those we have conducted in India. Subsequently they did come up with more interested people and we are committed to take them a workshop. This may take place in July 2004.

At the end of the CAMP, in a closing presentation, bats were again the case study as we described how to follow up a CAMP preparing educational materials for all ages, encouraging field biologists themselves to try their hand at educating the public, contacting policy makers, foresters and NGOs, and pursuing appropriate wildlife legislation for bats.

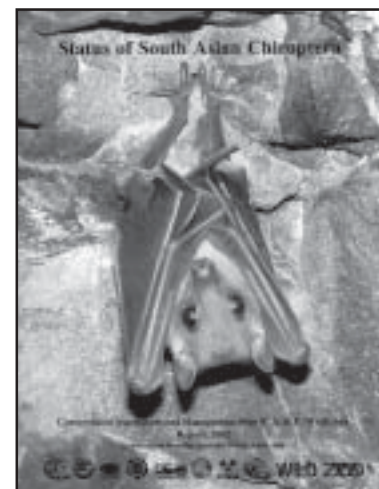
We handed out CBSG South Asia forms and offered taxon network forms. We got 31 CBSG SA members



and a number of taxon network members in addition to the Chiroptera Group mentioned before. This was the most enthusiastic response we have had to a call for CBSG South Asia members. In 2004 we have scheduled a Freshwater Fish CAMP, a Chiroptera Field Techniques Workshop, a South Asian Zoo Association meeting and a CBSG/RSG joint meeting. We look forward to many trips to Pakistan and to working with the very enthusiastic field biologists and zoo community there. Thus our greatest challenge this year became one of our great opportunities. 

Submitted by:

*Sally Walker, Convenor, CBSG, South Asia
Sanjay Molur, Red List Advisor, CBSG, South Asia*



CBSG Southern Africa: 2003 Key Successes and Lessons



EWT

The South African Mammal CAMP was a national project coordinated by CBSG Southern Africa in response to the need to update the South African Red Data Book for Mammals. South Africa has approximately 295 terrestrial and marine mammals situated in 9 provinces. A CAMP for South African mammals was therefore initiated to develop a comprehensive dataset on each terrestrial and marine mammal species in South Africa and to assign each species an IUCN category of threat. Geographical Information System (GIS) maps depicting the Extent of Occurrence and Area of Occupancy for all terrestrial mammals was required. CBSG Southern Africa was asked to facilitate the CAMP workshop and to manage the entire project.

Project Process

More than 90 mammalogists were asked to complete taxon datasheets for species of their expertise and almost all taxon datasheets were returned to CBSG Southern Africa before the CAMP workshop. Thirty-five participants attended the 6-day CAMP workshop and in total, data and input was received from almost 90 participants from 35 organizations.

1. Strengths of this project:

- The neutrality of CBSG and the Endangered Wildlife Trust (EWT) as project coordinators prevented the project from being hamstrung by issues like intellectual possessiveness, institutional territory and poor collaboration.
- Funding was obtained from the private sector due to strong, well-established relationships between CBSG Southern Africa and this sector.
- The CAMP workshop structure/format is effective for obtaining the most interaction, participation and data sharing. Participants feel more involved and ownership over the results is greater than would have happened without this method being used.
- The fact that taxon datasheets for almost all mammals were returned to CBSG Southern

Africa prior to the workshop helped enormously. It enabled us to identify species for which no data was available and to adequately address this. It also enabled us to work out beforehand, the spread of experts, the division of groups and to allocate species and experts into working groups.

- The project and its publications are considered the “property” of each and every participant. Buy-in and ownership over the publication, the results and the implications of these results for future conservation, research and management, were achieved at the outset of the project.
- Having experts in the use and application of IUCN Red List criteria is essential, and Craig Hilton-Taylor and Onnie Byers were invaluable. For the results of the assessments, and especially for those of endemic species, to be accepted and used in the IUCN Global Red List, it is also essential that the IUCN Red List Program participates and validates the data and assessments.
- It is essential to have a database designer/programmer like John Williams attend, so that problems with the database are sorted out immediately.
- The CAMP database is fantastic and allows for ease of input and effective data searching and organizing.
- Red List training is essential for as many people involved with CAMPs as possible, and a training workshop in the application of IUCN Red List criteria was held just prior to this CAMP. Despite the fact that only a few participants in the CAMP attended, it made a significant difference to their understanding and use of this system.
- The wide variety of participants and organizations involved has contributed to public awareness of the project, and has resulted in an almost incidental promotional campaign. This has

generated enormous support for the project and will contribute to its acceptance in relevant circles.

- Assessments of endemic species were submitted to the IUCN Red List Office for integration into the 2003 Global Red List. This was made much easier due to the involvement of the IUCN Red List Office right from the beginning, their input into the process, the application of the Red List criteria, the review process, the numerous debates and their input into final species listings.

2. Weaknesses in this project:

- I recommend doing smaller CAMPs with fewer species and sticking to different orders. Combining orders and dealing with a large class such as mammals, requires a different approach to issues like taxonomy and distribution (bats differ from rodents and cetaceans) and different expertise is required.
- Furthermore, in the development of a conservation plan, many issues are different and no depth can be reached when working across such a diverse group of participants and species.
- For an editor, time with each working taxon-specific group is essential. If the group is too big, and this is not possible, it is difficult to catch up with decisions made and to understand why certain categories were assigned.
- The logistics of dealing with such a large group, in terms of funding the workshop, managing the group, keeping track of the data, producing the publications (which reached more than 700 pages of data!) and editing the final product can be cumbersome with so many species.

- Prior to the workshop data on CITES listings, global IUCN assessments and previous national listing must be circulated. This basic data can take months of editing if inputted incorrectly.
- For migratory species, issues like the definition of vagrants needs to be discussed as a group beforehand as it can confuse editing processes dramatically.
- The editing process, if done thoroughly and allowing for possible debates over some species, takes longer than expected - double the amount of time allocated to this.

General Comments

CBSG CAMPs should be more widely integrated into the IUCN Global Red Lists. If the assessments are performed accurately and the review process is rigorous, more regional Red Data Books should result from CAMPs and more of the IUCN Global assessments should result from CAMP assessments for endemic species. The workshop format is a brilliant forum for reviewing data and assessing species and CBSG's general workshop principles are conducive to getting the best input and participation. This project was a learning curve for all and huge appreciation goes to Onnie Byers, John Williams, Craig Hilton-Taylor, Brenda Daly, Vodacom and the National Research Foundation and all 90 participants and contributors for their input, participation and support of this project.



*Submitted by Yolan Friedmann,
CBSG Southern Africa*



CBSG Japan Update



Elephant Health Care Training

The first Asian elephant in a Japanese zoo arrived on 27 June 1888. Two elephants (15-year-old male and 8-year-old female) were presented by the Emperor of Siam (presently Thailand) to Ueno Zoo in Tokyo. This was the beginning of elephant captive breeding in Japan, but unfortunately these elephants died without any reproduction. After that, one pair of elephants came to Japan, but they also died with the influence of World War II. After WWII, many zoos were built in Japan, and they bred many elephants. In 1998, there were 61 elephants in 37 zoos. However, zoos do not maintain elephants as a pair because male elephants are dangerous, and the elephant reproduction history in Japan has still been unsuccessful. There is no success case even in the 115 years that have passed since the elephant captive breeding program was started.



CBSG Japan reflected on this, and to improve this situation, we have investigated the situation of Indonesia and Thailand, where they have a history of Asian elephant

captive breeding with many successful reproduction cases since 2000. In September 2003, we held the Elephant Health Care Training Course for veterinarians, keepers and zoo personnel, with the cooperation of the faculty of Veterinary Medicine, Chiang Mai University. We would like to thank Dr. Suvichai Rojanasathien, Dean of Chiang Mai University, Dr. Tulyawat Suttiphaet, Dr. Chatchote Thitaram and other veterinarians for their cooperation. 🦋

*Submitted by Hiroshi Hori,
Convenor, CBSG Japan*

SEAZA Presents its First Ulysses S. Seal Award

In the General Assembly session of the 12th annual SEAZA conference, a representative of CBSG Indonesia read a special letter from new CBSG chairman, Dr. Robert Lacy. Dr. Lacy thanked SEAZA for inaugurating the Ulysses S. Seal Award to recognize the former CBSG chairman's leadership, great knowledge, dedication and inspiration to all SEAZA members. The presentation of the first Ulysses S. Seal Award took place during the conference. The proud recipient was Taman Safari Indonesia (TSI). TSI was honored for its multi-species breeding successes and other comprehensive programs. In addition, special mention was given to Thailand's Khao Kheow Open Zoo for its work on clouded leopards.



Taman Safari Indonesia and PKBSI hosted this year's SEAZA conference. Over 150 delegates attended from 15 countries, including Australia, Hong Kong, Japan, Korea, Malaysia, New Zealand, Singapore, South Africa, Taiwan, Thailand, USA, Vietnam and several European countries. The theme of the conference was "Capacity Building through Cooperation", and during the conference's six scientific sessions, a total of 34 papers were presented covering the topics of behavior, ecology, reproductive technology, genetics, captive breeding, veterinary care, nutrition, environmental enrichment, conservation education and keeper training. 🦋

CBSG Mesoamerica Update

Over the past year and a half, CBSG Mesoamerica accomplished the following projects:

- August 31-September 02, 2002, San Ramón, Alajuela: CBSG Mesoamerica hosted the “Costarrican Amphibians CAMP” in San Ramón Reserve, Costa Rica. All Costarrican native amphibian species were analyzed. The information available was included in the CAMP Data Base and 200 species were evaluated, 18 of which were considered critically endangered, and possibly extinct.
- November 1-3, 2002: Yolanda Matamoros attended the Meeting of the Argentinean Zoo Association, and represented CBSG in CITES, TRAFFIC, Zoos, Biology and Conservation.
- January 16-18, 2003: CBSG Mesoamerica organized the “Cuban Plants CAMP III” at Jardín Botánico Nacional, La Habana, Cuba where 92 species were analyzed by 22 participants from 10 institutions belonging to the Cuban Botanical Gardens network.
- January 20-23, 2003: CBSG Mesoamerica organized the “Cuban Iguana (*Cyclura nubila nubila*) PHVA” at Jardín Zoológico de La Habana, La Habana, Cuba where 30 participants from 14 institutions attended. This meeting was generously supported by the Zoological Society of San Diego.
- February 17-21, 2003: CBSG Mesoamerica organized the “Costarrican *Cattleyas* PHVA” at Parque Zoológico y Jardín Botánico Nacional Simón Bolívar, San José, Costa Rica where 23 participants from 12 institutions developed a strategic plan for the conservation of this genera of orchids. This workshop was generously financed by Henry Doorly Zoo, Omaha, Nebraska.
- April 28-30, 2003: CBSG Mesoamerica organized the “Disease Risk Workshop” where 40 participants from 30 institutions and 11 countries participated. Parque Zoológico y Jardín Botánico Nacional Simón Bolívar, San José, Costa Rica hosted the meeting and US Fish & Wildlife Service and Henry Doorly Zoo supported it.
- August 18-21, 2003. Yolanda Matamoros represented CBSG/SSC/IUCN at the CITES Animal Committee Meeting in Geneva, Switzerland.
- September 24-26, 2003. Yolanda Matamoros assisted in the facilitation of the Chilean Fisheries Management Workshop in Puerto Montt, Chile. 🦋



*Submitted by Yolanda Matamoros,
Convenor, CBSG Mesoamerica*



Global Patterns of Mammalian Species Diversity: Understanding the Current Extinction Crisis




Few, if any, environmental problems are as important as the decline of biodiversity caused by the explosive growth of human population. Recent research on global patterns of mammalian diversity have shown that the magnitude of the extinction crisis is larger than previously estimated when considering the discovery of new species and the loss of population.

On the one hand, the discovery of more than 200 species of mammals new to science in the last 10 years points out our imperfect knowledge of the Earth's biodiversity. New species have been found in most orders including insectivores, bats, rodents, rabbits, ungulates, monkeys, and whales. Although new species have been found throughout the world, most have been found in Southeast Asia and South America. For example, 12 species of monkeys have been described from the Atlantic and Amazon forest in Brazil. In Southeast Asia an amazing wealth of new species has been found in the Annamite mountain range, in Vietnam, Cambodia, and Laos that include five ungulates. In general, new species have very small geographic ranges and have been found in regions threatened by deforestation and other human activities. It is likely that many undescribed species have become extinct or could become extinct even before they are discovered by scientists.

On the other hand, recent research has shown that the rapid and accelerating loss of distinct populations is a neglected aspect of the extinction crisis. Populations are disappearing much more rapidly than species, causing serious erosion of genetic and species diversity. Hundreds of thousands of populations of all kind of organisms have become extinct. For example, among 177 species of mammals from 5 continents most have lost between 75 to 100% of their populations in historic times.

The loss of populations and species should concern us for aesthetic, moral, philosophical, recreational, and

many other reasons. However, perhaps the most important reason for humans to preserve populations and species is for their crucial role in providing humanity with ecosystem goods and services. Ecosystem goods are those products supplied to us by natural ecosystems, such as timber and fibers. Ecosystem services are those vital services supplied free of charge to society by natural ecosystems. They include amelioration of the climate, running of the hydrological cycle, prevention of floods, generation and preservation of the soils that are critical to agriculture and forestry, pollination of crops, control of crop pests, and so on.

A comprehensive conservation strategy for the world's mammals should incorporate these issues through detailed analysis of the patterns of distribution of species, with an emphasis on restricted and endangered species. My evaluation of the patterns of distribution of all species of mammals to determine the priority areas for conservation indicates that to preserve at least a population of all species, more than 1200 (100 sq km) protected sites, distributed across the globe, are required. Preserving 10% of all the populations substantially increases the number of sites. So, a clear message from this analysis is that a comprehensive conservation strategy requires protecting populations both in reserves and in the countryside. That is critically important both for the survival of Earth's great diversity of species and also for the survival of our species. 

Presented by Gerardo Ceballos, Instituto de Ecología, Nacional University of Mexico

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Conservation of the Black-faced lion tamarin, Brazil

This program for the conservation of the black-faced lion tamarin (*Leontopithecus caissara*) is conducted in the Guaraqueçaba Protected Environmental Area (PEA), which protects 3,134 km² of Atlantic Rainforest, one of the most threatened ecosystems of the planet. The region is home to many endemic and threatened species, and is one of the last areas of Atlantic Rain forest in Brazil. Superaguí National Park is located within the limits of the Guaraqueçaba PEA. The park protects 34,000 ha of forest, including two islands - Superaguí and Peças - and a small portion in the continent. Today, there are 16 fishing communities (about 2,400 people) living in the surroundings of the park. Due to Guaraqueçaba's rich biological diversity and the many different aspects related to conservation in the region, we have been using an integrated conservation approach to deal with the conservation issues in the area. This model starts with research on species biology and then uses this data to expand and include other conservation issues, such as habitat restoration, education, community participation, and decision-making. We have been researching the tamarins since 1996, and our goal is to design and implement a conservation and management plan for the species.



Photo by Luis Claudio Marigo

The main research topics include natural history, distribution, demography, and habitat quality and availability. The distribution of the species is restricted to 300 km² and the population is divided into two areas, one on the continent and the other on the Superaguí island. After surveying, about 150 individuals were found in the continent and 180 in the island, resulting in a total wild population of about 330 tamarins. Using a GIS tool, we defined the priority areas for management and identified habitats preferred by the species. To gather all of the pieces of information for the design of a management plan for the species, we found it useful to conduct a health assessment of the tamarin populations in the island and continent. This evaluation includes a detailed investigation on the occurrence of parasites and infectious diseases in the populations. We are also evaluating the health conditions of the

human communities in the surroundings of the forests. All projects include environmental education, which is our opportunity to give the information back to the community. We work with a diverse public that includes students, teachers, fishermen, and women. We are working with 6 different villages (about 1,200 people). An important component of this environmental education program uses the red-tailed amazon, an endangered parrot endemic to the region, as a flagship species. We stimulate women and children to use art and traditional knowledge to develop local handicrafts, and the sale of the products adds to family income. The main products they have been producing are the tamarin and parrot puppets, which are being sold in several stores in Brazil and outside of the country. Fishermen have been difficult to reach, as they have no relationship with the forest. They earn their living exclusively from fishing and it has been quite difficult to talk about conservation when they are facing

serious decline in fishing. For this reason, we decided to focus part of our work on the fishermen. We developed activities such as lectures and workshops on marine aquaculture, we supported them in the creation of a fishing management council, we created 3 marine aquaculture associations, and we worked on strengthening the community organization and structure. The main idea behind this work is to support these fishing communities in many ways that will lead them to an increase in family income. Taking into account that fishing decline is a major problem, we started investigating the causes. We carried out evaluations of fishing production and effort, biomass loss, presence of oyster banks, occurrence of illegal fishing and its impact, and we started working on the creation of a sustainable fishing model. We found out that one of the best alternatives for the local fishermen was the establishment of marine aquaculture plots, and the first pilot projects have been implanted over the past few months. For the past 7 years, our efforts to conserve the black-faced lion tamarin combined conservation initiatives such as ecological research, research on marine biology, sociology, environmental education and public policies, working on an integrated way, which will hopefully guarantee the survival of this endangered species and the well-being of the local communities.



*Presented by: Patrícia Medici, IPÊ -
Institute for Ecological Research*

Human Population and Habitat: Why Migration Matters

PHVA workshops take into consideration the consequences of human populations on the local habitat. However the determinants of population change, especially the key role played by migration, have been less considered. Recently, those interested in population and environment have promoted a set of “community-based population and environment programs” that include family planning as one component, on the assumption that the reduction of the fertility rate is necessary for reducing the growth of human numbers and alleviating long term pressure on local resources and habitat.



those forming households over the next 20 years have already been born. In consequence, efforts to reduce fertility have only a long-term payoff. The benefits start to arrive much later.

On the other hand, the effects of migration are immediate. The village of Serei on the north coast of Sulawesi, the site of an integrated coastal management project, held 300 households in the year 2000. In 2001-2002, the Office of Transmigration of

Indonesia built 710 houses in Serei for refugees fleeing the strife in the Moluccas. The number of households tripled in the course of 18 months. Such a change may completely overshadow changes derived from reduced fertility. Further, migrants are often more dependent upon wild resources than long-term residents and may disproportionately threaten wildlife.



Integrated conservation and development projects may be particularly vulnerable to pressures from immigration. Should these projects provide economic benefits to local residents, immigrants are likely to be attracted.²

While there is nothing wrong with providing such services, if one really wants to stabilize local populations at current levels, reducing fertility will provide you with little or no benefit for 20 years. In addition, in many communities where I have conducted population appraisals, migration is the driving factor of population growth.¹

It is certainly true that communities living in areas adjacent to protected areas often have high fertility and a large proportion of children. Such a population has what is called population momentum, i.e. it will continue to grow rapidly, even with reduced fertility. In fact, the number of households in a community is essentially independent of the fertility level for a period of about 20 years. That is because almost all

It is advisable for environmental projects to factor migration patterns into their development strategies. There are at least two approaches that may be followed: (1) provide clear title to land and access to resources to existing residents; and (2) create conditions that support some level of emigration from a community.

The management of local land and the legal system that provides use rights to migrants may be major factors in encouraging or discouraging immigration. The rights of local communities to own, manage, and protect their local resources are likely to be a key factor in future migration patterns. To the extent that local land is clearly owned and titled to existing

residents, it becomes more difficult for immigrants to move in or squat, hence reducing the flow of immigrants into the local area. In many areas, community members have no legal title of ownership or rights to the land that they use. Hence the land is like a commons, open for all, including new migrants. One avenue used by the Coastal Resources Center in coastal communities in Sulawesi has been to obtain title for residents to the lands that they have long been using.

Throughout the last century, a dominant trend of most societies has been a movement of people from remote or rural areas to urban areas. This trend provides the basis for a strategy for conservation groups to utilize in selected locations. What are the factors that locally result in some level of emmigration from more isolated communities to urban areas? It appears that one factor is access to higher education. Some proportion of children that receive a high school diploma are likely to continue to a university, and some proportion of these will seek urban opportunities. To effectuate such a strategy requires making high school education accessible to children in the community.

In making projections of the population of local communities in areas adjacent to protected areas, we have found that low-levels of emmigration will immediately reduce the rate of population growth. If one of the goals of a conservation strategy is to maintain a more stable local population, it becomes necessary to consider migration. The goal is to achieve a 1% - 2% annual rate of emmigration to balance the increase that come from natural increase (births minus deaths).

It must be noted that issues of migration are difficult and sensitive. Specific policies to prevent or encourage migration are rarely successful. High rates of emmigration are likely to be quite destructive to local community culture, just as high rates of immigration may result in environmental destruction and community conflict. The goal is one of stabilizing local population, not reducing it. Rural communities that I have visited that are losing population often are having great difficulties, and may be very difficult for conservation groups to work with. Most people like to think that the communities where they live are



desirable places, and local leaders may often point to population growth with a measure of pride.

Even if the growth of households, the working age population, and consumption of local resources is independent of fertility change for the first 20 years, this does not mean that a project should not bring reproductive health services to local communities. Such services have a number of other benefits: better health for women, children, and families; increased ability of families to determine the number of children that they want; and greater per-child allocation of resources for the education and care of children. Most communities will also be pleased to have such improved services. However, a close look at the actual determinants of population growth in a local community will probably indicate the significance of migration, and may suggest a very different set of project priorities.

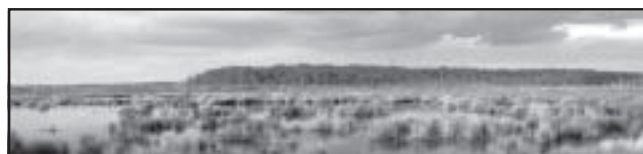


Presented by John Williams

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¹ John S. Williams. 2003. Incorporating Community Population Appraisal in Endangered Species Workshops, in F.W. Westley and P.S. Miller (eds). *Experiments in Consilience: Integrating Social and Scientific Responses to Save Endangered Species*. Island Press, Washington DC.

² Paul Scholte. 2003. Immigration: a Potential Time Bomb under the Integration of Conservation and Development. *Ambio* Vol. 32 No. 1. Pp 58-64.



Progress of PHVA Evaluation

Introduction

CBSG has been using a system of surveys to evaluate the Population and Habitat Viability Assessment (PHVA) process. Surveys are conducted the first and last days of the workshop, and then mailed out to the same participants two years following the workshop. Recently, a fourth survey was added to the process. Strictly speaking, however, it is not part of the existing evaluation suite, nor is it entirely a questionnaire but rather an 'interview instrument'.

Theory

Survey #4 concerns two main components of conservation, the *program* and, in a multitude of configurations, the *process* that supports it. It inquires if the prioritized recommendations were implemented and, if so, did they work? The information that results may then be assimilated and offered back to the PHVA process team for adjustment, fine-tuning or further monitoring as required.

Method


Prior to the interview the interviewer sends, in advance, the spreadsheet of edited recommendations. The interviewer recalls all (or if too many, a selection) of the recommendations and asks if they have been implemented. The aim is to find out what happened, and the interviewee/s are selected with this in mind.

Questions are:

- Did you find the PHVA workshop valuable?
- Do you use the PHVA final report for reference?
- How would you finally evaluate the success of the program?
- Is the species now in a state of accelerated decline, decline unchanged, slowed decline, recovery, recovered?
- Would you care to identify your most valued financial contributors?

Results

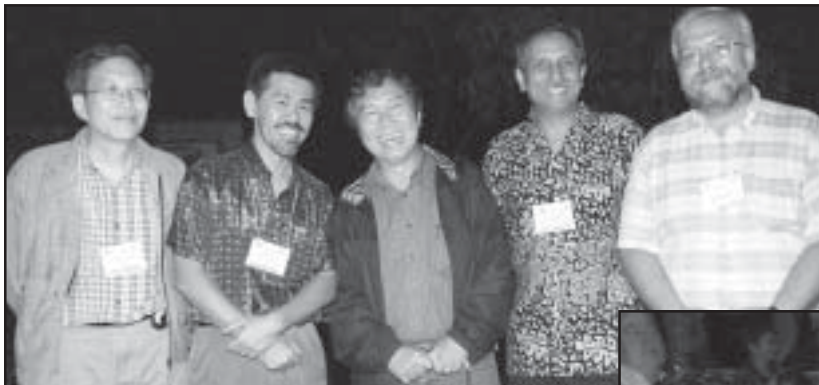
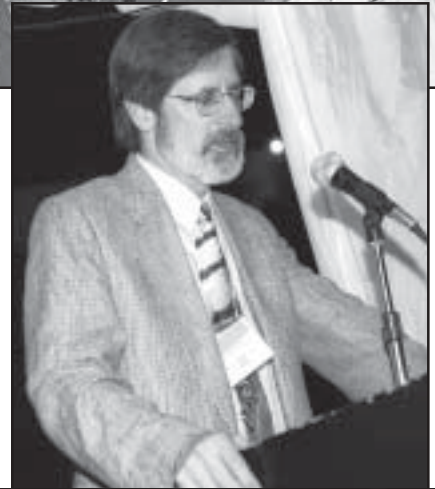
- With under one-third of scheduled programs interviewed, 400 PHVA recommendations have been recalled with 54% claiming implementation, 33% not.
- Of 140 recommendations implemented (more recently clustered with the original 'goal' where usefully recorded) 64% claimed 'it worked', 20% not.
- Of 92 opportunities to estimate the PHVA influence on a scale of 0 to 3, 75% scored a 3 or 2, with a significant majority giving 3.
- Some of the above may have implications for the adjustment of the existing PHVA process, and possibly, in a few cases, for considering the inclusion of entirely new process elements.

In conclusion, I would greatly value any feedback and advice as soon as possible as the interview process will recommence in the third week of March 2004. 

Presented by Simon Hicks



2003 CBSG Annual Meeting Memories...



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Milwaukee County Zoo, USA

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National Zoological Gardens of South Africa, Pretoria

Labuschagne, Willie

National Zoological Park, USA

Wildt, David

Norden's Ark, Sweden

Linden, Lena

Ocean Park Corporation, Hong Kong

Gendron, Suzanne

Odense Zoo

Klausen, Bjarne

Omaha's Henry Doorly Zoo, USA

Simmons, Lee

Osaka Municipal Tennoji Zoo, Japan

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PAZAAB

Morgan, Dave

Paignton Zoo Environmental Park, UK

Tonge, Simon

Poznan Zoo, Poland

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Prague Zoo, Czech Republic

Rehak, Ivan

Rosamond Gifford Zoo, USA

Baker, Ann

San Diego Zoo, USA

Erhardt, Robert

SeaWorld, USA

Andrews, Brad

St. Louis Zoo, USA

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Bonner, Jeffrey

Hoessle, Charles

Miller, Eric

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Lin, Hwa-Chin

Pen, Shawn Jen Lung

Tsa, Eric Hsienshao

The Wilds, USA

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Kral, Bohumil

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Wakefield, Renata



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