



CBSG News

Inside...

Reports from the
2000 Annual Meeting

- Membership Renewal
- Regional Reports
- Working Group Reports
- Special Reports
- Donor News
- Announcements

*Volume 12
Number 1
April 2001*

*Newsletter of the
Conservation Breeding
Specialist Group,
Species Survival
Commission,
World Conservation Union*

CBSG Membership Renewal Time

Every three to four years, in coordination with the IUCN global assembly, all appointments to SSC Specialist Groups, including the chairpersons, are automatically terminated. The Chairman of the SSC is elected by the General Assembly of the members. David Brackett has been re-elected to chairman of SSC and has agreed to serve another three-year term, which will be his last. The Chairpersons of the Specialist Groups are subject to reappointment by the Chair of the SSC at his discretion, in consultation with the staff of the SSC and the Executive Committee of the SSC. There is no limit on the number of terms that a Chairperson of a Specialist Group may serve. I have been asked and have agreed to serve another term as Chairman of CBSG. I in turn am delegated the responsibility of nominating the members of CBSG for formal appointment as members of SSC in CBSG by the Chairman of the SSC.

Accompanying this issue of *CBSG News* are a letter of nomination to membership to CBSG and SSC, a form requesting specific information for inclusion in the SSC and CBSG databases, and a survey questionnaire requesting information on your role as a volunteer in CBSG and the SSC. ***If you choose to continue as a member of CBSG, it is essential that you complete the form and mail it to CBSG in the enclosed addressed envelope.*** If you fail to return this form, you will be dropped from the roles as a member and will no longer receive either the SPECIES magazine of the SSC or the CBSG newsletter.

CBSG is using a modification of the SSC survey to gather information from our widely dispersed group. There are about 900 members in 90 countries, making it impossible for us to meet as a group. It is our intention to use the information gathered to assist in increasing the effectiveness of CBSG by better understanding what you value most highly in your participation in CBSG, which of your needs may be addressed through CBSG participation, and what you might be willing to do. One action may be to further develop CBSG networks in each region.

-- continued on p. 2 --

Continued from p. 1 . . .

I appreciate your cooperation in completing this membership profile, and also returning it to the CBSG office in the same envelope with the membership form, by fax, or by email (office@cbsg.org). Please answer the questions with a tick (✓) where possible, but some questions require a narrative answer; please provide extra narrative wherever you wish. Please complete this form and return it along with your acceptance Membership Record Form to the CBSG Office *no later than 15 June 2001*.

Enclosed you will also find a trilingual document entitled "Welcome to the Species Survival Commission". This provides important information about IUCN and SSC. If you wish to know more about IUCN or SSC, a comprehensive set of documents is available at: <http://www.iucn.org/themes/ssc/memonly/memint.htm>. You will also find a brochure about CBSG. Additional information can be found on the CBSG web site at: www.cbsg.org.

I hope that you will accept this invitation and look forward to working with you in the CBSG.



Ulysses S. Seal, CBSG Chairman

From the Editor

This issue of *CBSG News* contains summaries of regional and special reports given at the 2000 CBSG Annual Meeting held in Palm Desert, California, USA in October 2000. Also included are summary reports from the various working groups convened during this meeting. Approximately 100 CBSG members attended the annual meeting, bringing together people from around the globe to discuss the various aspects of conservation of our planet's biodiversity. The CBSG network continues to contribute to this conservation process. CBSG conducted and/or participated in 74 workshops and meetings since the last annual meeting in 1999, and this year's agenda continues to be demanding. These projects are made possible by the 146 donor institutions and organizations, the CBSG strategic associates and program coordinators, and by the 963 individuals in 93 countries that comprise the membership of CBSG. We thank you for your support.

2001 CBSG Annual Meeting

The 2001 Conservation Breeding Specialist Group Annual Meeting will be hosted by the Perth Zoo and will be held on beautiful Rottnest Island, Australia. Meeting dates are 19 – 21 October 2001. The agenda will again include regional reports as well as working groups focused upon taxa and issues of conservation concern.

All CBSG members should receive meeting invitations shortly. For more meeting information, contact Merri Blakemore at Perth Zoo (email: merri.blakemore@perthzoo.wa.gov.au). We hope to see you in Australia!

CBSG News

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:

CBSG News
12101 Johnny Cake Ridge Road
Apple Valley, MN 55124-8151 USA
Phone: 01-952-997-9800
Fax: 01-952-432-2757
E-mail: office@cbsg.org

CBSG Staff

Chairman: Ulysses S. Seal, Ph.D.
Editor: Kathy Traylor-Holzer
Senior Program Officer: Susie Ellis, Ph.D.
Program Officer: Onnie Byers, Ph.D.
Program Officer: Philip Miller, Ph.D.
Administrative Officer: Shelly O'Brien
Administrative Officer: Jenny Shillcox
Administrative Assistant: Moriya McGovern
Administrative Assistant: Michelle Brogger

Strategic Associates: Doug Armstrong,
Don Janssen, Bob Lacy, Mike Maunder, Lee
Simmons, Ron Tilson, Harrie Vredenberg,
Sally Walker, Frances Westley, David Wildt

Contents...

Regional Reports

ARAZPA Regional Report	4
AZA Regional Report	6
CZA Regional Report	8
EAZA Regional Report	9
FZG Regional Report	10
PAAZAB Regional Report	12
SEAZA Regional Report	13
CBSG Regional Office Reports	14

Working Group Reports

Invertebrate Report	17
Elephant Report	18
Global Cheetah Conservation Report	20

CBSG Donor News InsertDonor 1-8

Working Group Reports -- continued

Bushmeat Crisis Report	21
Invasive Species Report	22
Transponders Report	23
CITES Report	24
Zoo Conservation Handbook Report.....	25
IUCN Policy on <i>Ex Situ</i> Population Management	26
ISIS Advisory Committee Report	28

Special Reports

Tree Kangaroo.....	29
Biocomplexity Project.....	30
Pan African Sanctuary Alliance	31
Invertebrate TAGs	32
Nutrition Database	34
Capacity Building	35
Joint Venture Partnerships	36
Cuyebano CAMP	38

Announcements..... 39

CBSG Mission Statement

The mission of the Conservation Breeding Specialist Group is the conservation or establishment of viable populations of threatened species.

The goals of CBSG are to:

1. Organize a global network of people and resources.
2. Collect, analyze and distribute information.
3. Develop global conservation breeding programs.
4. Integrate management programs for captive and wild populations.



ARAZPA Regional Report



The Australasian Regional Association of Zoological Parks and Aquaria (ARAZPA) currently represents 46 zoological institutions and 10 associated institutions. ARAZPA membership also includes 188 individual members working within, or associated with, the zoo and aquarium community.

Policy Development

ARAZPA formally approved a new code of practice during 2000, the result of two years of consultation with the membership. The new code covers many aspects of zoo management. In recognition of zoo involvement with issues associated with wildlife management in the wild, ARAZPA also adopted a position statement on the sustainable use of wildlife.

Australasian Species Management Program

Last year, a revised framework for ASMP processes was developed, including:

- New species management categories separately indicating the primary focus of the program and the intensity of population management required;
- A formalized approach to lower intensity population management;
- A new species evaluation process;
- New, more flexible definition of a management plan, which recognizes a broader range of species-related activities and streamlines progress by allowing discrete program components to proceed independently;
- A formalized approach to resolving the problems of taxonomic and captive management units; and
- Written procedures/guidelines for TAGs.

Species Conservation Programs. ARAZPA institutions are currently involved with wildlife agency recovery programs for 28 taxa native to Australia and New Zealand. Captive management for these species is directed either at reintroduction of captive-bred or captive-raised animals.

Programs for 18 species are currently releasing captive animals to the wild. The following newly established wild populations have bred now beyond the second generation: mala (*Lagorchestes hirsutus*), chuditch (*Dasyurus geoffroii*), Eastern-barred bandicoot (*Perameles gunnii*) and greater stick-nest rat (*Leporillus conditor*).

Captive populations of an additional five species are managed as part of broader conservation programs operating outside Australasia. These include the Sumatran Tiger Project, where, in collaboration with the Sumatran Tiger EEP, 21st Century Tiger and Flora and Fauna International, the ASMP is supporting anti-poaching programs in Indonesia.

In addition, this year saw ARAZPA's first involvement with species recovery programs in Papua New Guinea. As a result of the 1998 CBSG Tree Kangaroo Conservation Workshop held in Lae, PNG, a recovery program for the tenkile (*Dendrolagus scottae*) is currently being developed in a partnership between local representatives, the PNG government, The Nature Conservancy and ARAZPA zoos.

Population Management Programs. Another 56 species are managed under Population Management Programs. These programs aim to improve the sustainability of zoo populations and ensure their persistence for educational display.

Taxon Advisory Groups. ASMP review has resulted in new rules and procedures for TAGs, which have been outlined in the new ASMP Procedures Manual.

Wildlife Conservation Fund

A new initiative for ARAZPA this year is the development of the ARAZPA Wildlife Conservation Fund, which is being established specifically to direct resources to support *in situ* conservation projects for threatened species. Candidate projects must:

- Contribute to preserving habitat or conserving a species in the wild;
- Operate within a range country for the species;
- Operate either in collaboration with the relevant wildlife agency, or with the support of that agency;
- Be fully accountable (i.e., properly budgeted and prepared to meet reporting requirements).

Collaboration with ISIS

For the past two years, ARAZPA has run an Australasian branch of ISIS in its Sydney office. In June 2000 this arrangement drew to a close; however, current discussions aim to re-establish an ISIS Australasian branch office.

ARAZPA continues to collaborate more broadly with ISIS. Activities include participation in the ISIS Futures Search Workshop in Alphen in February 2000, and organization of a REGASP design workshop to develop a design brief for the new MS Windows version of REGASP.

Education and Training

ARAZPA’s Education Specialist Group has now established two regional education programs:

- **Frog Focus.** Last year, a regional frog education program called Frog Focus was designed to raise awareness of the plight of amphibians through the distribution of educational resources and delivery of programs regionally through schools and community groups. The next phase of this program is directed toward establishing a web presence and developing CD-based educational tools.
- **Environmental Awards.** During 2000, ARAZPA collaborated with Reader’s Digest to run the Reader’s Digest Environment Awards. These awards provide AU \$50,000 prize money to environmental management and education programs around Australia.

Training. Training undertaken by ARAZPA staff during the past year included:

- Teaching Captive Population Management as part of Captive Vertebrate Management, a graduate certificate course run by Charles Sturt University.
- A number of on-site training programs were run for staff of ARAZPA institutions. The courses covered record keeping (1 course), basic studbook keeping (3 courses) and population management (2 courses).

Publications

ARAZPA publications during 1999/2000 included:

- 2000 Regional Census and Plan for ARAZPA zoos and aquariums
- Proceedings of the 1999 ARAZPA/ASZK Annual Conference
- ARAZPA Futures Search Briefing Book and Final Report
- Reptile and Amphibian TAG Action Plan
- ASMP Procedures Manual, 2nd Edition
- Species Action Plans for Tasmanian Devil, Fijian Crested Iguana and Giraffe



The association also publishes quarterly editions of the *ARAZPA Newsletter*, reporting news of regional developments and zoo and aquarium activities, and (jointly with the ASZK) bi-annual editions of the technical journal, *Thylacinus*. In addition, a total of 83 studbooks were submitted to ISIS for publication on the *ISIS/WZO Studbook Library CD ROM*.

Significant Departure

Finally, with the resignation of Christine Hopkins from the position of Executive Officer earlier this year, ARAZPA lost one of its more influential and significant personalities. The achievements of the ASMP and ARAZPA, and the reputation that the association now enjoys, are due in no small part to Christine’s efforts over the last seven years. 🐾

Submitted by Jonathan Wilcken, ARAZPA.

Don't miss the 2001 CBSG Annual Meeting, 19 – 21 October on Rottnest Island, Australia!



AZA Regional Report



The American Zoo and Aquarium Association (AZA) represents 185 North American zoological institutions and nearly 6,000 zoo and aquarium professionals. AZA currently has 370 studbooks, 105 Population Management Plans (PMPs), 96 Species Survival Plans™ (SSPs) covering 139 species, 43 Taxon Advisory Groups (TAGs), 10 Conservation Action Partnerships (CAPs), and 11 Scientific Advisory Groups (SAGs). The following represent some of the activities completed during 1999-2000:

Population Management/SSPs

The Population Management Center was developed to strengthen AZA's ability to provide genetic and demographic management recommendations for cooperatively managed species. Brookfield and Lincoln Park Zoos were selected as the site for this two-year pilot project. Two population biologists have been hired to provide SSP coordinators and population managers with analyses for the scientific management of SSP and PMP populations.

Data Management

- **Software and Technology Needs Assessment Task Force.** This task force was created to assess AZA's long-term needs in software and technology development. Special committees have examined record-keeping, population management, collection planning, and veterinary and aquarium needs.
- **ISIS Planning Meeting.** AZA staff attended the ISIS Strategic Planning Workshop in February 2000, which was designed to evaluate ISIS' current services and provide a vision for its future direction.

Strategic Collection Planning/TAGs

- **REGASP Implementation.** REGASP software has been updated to version 3.6, which is compatible with both ARKS 3 and ARKS 4.
- **Institutional Collection Planning Workshop.** The first Institutional Collection Planning Workshop was held at the AZA Central Regional Conference in Toledo in May 2000. The next workshop will be held at the 2001 AZA Western Regional Conference.
- **Regional Collection Plans Approved.** AZA's Wildlife Conservation and Management Committee (WCMC) has approved eight Regional Collection Plans (RCPs) under its recently adopted guidelines, bring the total of approved RCPs to 12.

Fund-Raising to Support Conservation

- **Conservation Endowment Fund.** The AZA Conservation Endowment Fund (CEF), which supports conservation initiatives of AZA members and collaborators, now has a value of almost US \$8 million.
- **1999 CEF Awards.** A total of 45 proposals were received, totaling over \$830,000 in requests. Of these, 17 projects representing a variety of taxa and approaches were funded for a total of \$271,089.
- **William G. Conway Chair.** Over \$1 million has been pledged over the next five years by AZA members to endow the William G. Conway Chair in Conservation and Science. It is hoped that the endowment can be used in coming years to expand the size and reach of the C&S Department.
- **Roy E. Disney Chair.** An initial pledge of \$500,000 over the next five years was made by the Disney Company to establish the Roy E. Disney Chair of Conservation Education, increasing immediate support for conservation education programs.

Field Conservation/CAPs

- **AZA ARCS.** Based on the 1998-99 Annual Report on Conservation and Science, AZA institutions supported nearly 800 conservation and related projects in 68 countries, produced 700 publications, and collaborated with 89 colleges and universities.
- **Committee-Endorsed Projects.** A web catalog of AZA Conservation and Science Committee-endorsed projects (named *AZA in Action: Partners in Conservation*) has been initiated. *AZA in Action* will provide a listing of high-quality conservation opportunities for AZA member support.
- **Field Conservation Committee Reorganization.** AZA's Field Conservation Committee is now fully integrated with its Conservation Action Partnerships.
- **Field Conservation Resource Guide.** The *AZA Field Conservation Resource Guide* is currently being published. This guide features 51 chapters from nearly 80 authors and is intended to provide guidance in becoming involved in field conservation activities.

Partnerships

- **Bushmeat Crisis Task Force.** The Bushmeat Crisis Task Force (BCTF) assisted with the development of a Bushmeat Works Group at CITES, publication of an information packet, and organization of a major Capitol Hill event (see website at www.bushmeat.org).
- **AZA/Society for Ecological Restoration MOU.** An Ecological Restoration Scientific Advisory Group has been proposed to promote further collaboration between AZA members and restoration projects.

- **AZA/Earthwatch MOU.** An MOU has been signed between AZA and Earthwatch/Center for Field Research (which provides volunteers and funding for many types of environmental projects).

- **AZA/AAZV/EAZWV.** AZA entered into an agreement with the American Association of Zoo Veterinarians and European Association of Zoo and Wildlife Veterinarians to assist with publication of the *Journal for Zoo and Wildlife Medicine*.

- **Ocean Project.** AZA continues to be a member of The Ocean Project (www.theoceanproject.org), a US-based consortium of major conservation organizations, aquariums, and natural history museums.

Conservation Planning

- **Elephant Planning Initiative.** The AZA Board has approved an implementation plan for elephant management. Support has been granted to convene an SSP Action Plan meeting to identify critical elephant conservation and research projects and to consider the possible establishment of regional cooperative bull holding or breeding facilities.

- **National Butterfly Recovery Strategy.** AZA will collaborate with the US Fish and Wildlife Service's Endangered Species Program and other partners to develop a US national butterfly recovery strategy. Planning will initially focus on California, where 15 of the 20 listed species occur.



Ethical Issues

- **AZA Acquisition/Disposition Guidelines.** AZA has revised its guidelines for the acquisition and disposition of animals by its member institutions.

- **Environmental Enrichment.** AZA institutions are now required to develop and implement an environmental enrichment plan.

- **Keiko/Free Willy Project.** M. Hutchins of AZA was asked to conduct an independent assessment of the Keiko/Free Willy Project, an attempt to induce a long-term captive orca to assume an independent life.

Publications

- **AZA Annual Report on Conservation and Science.** The 1997-98 edition was distributed and the 1998-99 edition is completed and awaiting distribution. The 1999-2000 edition will be the last one published in the traditional format; future information will be available in a database format on the AZA web site.

- **AZA/Smithsonian Book Series.** The third volume of this series, titled *Great Apes and Humans at an Ethical Frontier* has been completed and is expected to be ready for distribution by fall 2001.

- **Encyclopedia of World's Zoos.** AZA staff serves on the international editorial advisory board of this project and has submitted several essays to be included.

Government Affairs

The AZA Government Affairs Department provided oral and written comments in connection with numerous legislative issues, including the Bear Protection Act; Chimpanzee Health Improvement, Maintenance and Protection Act; Captive Elephant Accident Prevention Act; Great Ape Conservation Act; Keystone Species Conservation Act; Shambala Exotic Animal Protection Act; and Marine Mammal Protection Act. AZA participated in broad-based coalitions seeking increased funding for several animal, education and conservation-related issues.

Public Affairs

- **Media.** AZA and its members appeared in several newspapers and magazines nationwide, including *BioScience*, *Congressional Quarterly* and *Newsweek*.

- **2001 Membership Directory.** The most recent membership directory was published in Fall 2000 and can be ordered from the AZA web site.

- **Communique.** AZA's member magazine, *Communique*, has undergone major changes in the past year. The web version is available on the AZA web site.

Administration

- **AZA Web Site.** The average number of user sessions per day on the AZA web site (www.aza.org) is 2,932. The most requested documents are the photo gallery, job listings and AZA member directory.

- **Staff Changes.** The following staff have been hired: Steve Olson (Government Affairs); Lynda Martin-McCormick (Development and Marketing); Eric Reinhard (Training); Vicki Duckett (Publications); Joseph Lankard (Conservation and Science); Moe Aye (Accountant); Candace Croney (Conservation Education); Kristin Craine (Public Affairs); and Michele France (Executive Assistant). 🐾

Submitted by Michael Hutchins, AZA.

CZA India Regional Report

Central Zoo Authority

Central Zoo Authority (CZA) is the nodal authority for all zoos in India. CZA was set up by an Act of Parliament in 1991 in the Zoo Act. CZA is guided by the Zoo Act, legal norms and standards, and a National Zoo Policy. Central Zoo Authority:

- Inspects all zoos
- Gives direction for improvement
- Gives funds for improvement
- Reviews progress
- Accords recognition or de-recognition
- Decides policy
- Organizes training
- And many other things

This year the zoo community has taken many hits. Much of the energy of Central Zoo Authority and the major zoos has been taken up in responding to crises, the frequency and depth of which have made high government agencies question the feasibility of maintaining good zoos in India at all. Nonetheless, activities have continued and methods sought to prevent or quickly resolve such tragic events as have occurred in the last three months. Needless to say, the time and energy and loss of morale involved in responding to such crises seriously deplete positive and constructive resources. Many of you have written offering help, and this was much appreciated.

CZA Activities

- Central Zoo Authority sponsored a Strategic Futures Workshop led by Frances Westley and Harrie Vredenberg in November of last year. Senior officials, zoo directors, veterinarians, educators, welfare activists, and conservation officials participated.
- Central Zoo Authority provides a two-week training course annually to directors and curatorial level zoo personnel alternatively. This year the training for curators was held at the Calcutta Zoo. Lectures were held in the old Calcutta Zoo library in the presence of a painting of Ram Brahma Sanyal, who wrote the first zoo management book in the world in 1892, *A Handbook of the Management of Wild Animals in Captivity in Lower Bengal*.



- CZA also funded a national conference of zoo directors in support of the 125th anniversary of the Calcutta Zoo. Minister for Environment, West Bengal released the third volume of the *Indian Zoo Yearbook* brought out by IZDA. There was also a meeting of the Indian Zoo Directors Association.

Tiger Deaths

On the subject of the tiger deaths earlier this year, the Central Zoo Authority consulted with zoo and wildlife veterinarians and experienced directors from all over India. External experts, such as Dr. Francis Vercammen of Antwerp Zoo, also were contacted. The Supreme Court now has ordered a mega-investigation into the major zoos' husbandry and veterinary facilities. A group of experts are inspecting the large, medium and small zoos to prepare a report. CZA thanks everyone who wrote with concern and offers for help.

Studbooks and Breeding Programs

CZA is funding the Wildlife Institute to undertake five studbooks on "important" species: the Asiatic lion, lion-tailed macaque, Bengal tiger, Indian rhino and golden langur. Another CZA-sponsored program targets highly threatened species, and provides very generous funding for one zoo to undertake a breeding program. For example, Arignar Anna Zoo has been selected for the lion-tailed macaque, and they plan to establish a population of 300 animals in the next few years.

Zoo Design Training

This year for the first time, Central Zoo Authority is collaborating with the prestigious New Delhi School of Architecture to run a six-day course in zoo design for architects and engineers. The course will consist of didactic lectures, working sessions and field visits. This is scheduled for November-December. 🐾

Submitted by Sally Walker, on behalf of Central Zoo Authority.



EAZA Regional Report



The extensive European Association of Zoos and Aquaria (EAZA) professional network, and EAZA's widespread, multifaceted program of activities, have largely evolved in just the past 15 years. The European zoo community can now face the new challenges of the new century with much more confidence.

EAZA went through a rapid quantitative development in the last decade. The number of members grew from a few to almost 300 institutions in 34 countries. This rapid growth has made the organization strong but has also created unexpected difficulties. Now it is the time to slow the pace of our growth and pay more attention to the qualitative features of our organization.

Dr. Miklos Persanyi, EAZA's new Chairman, announced at the EAZA Annual Conference in September 2000 to foresee four strategic tasks:

- To safeguard the highest standards of our profession;
- To improve the quality of organizational operation;
- To strengthen coordination of EAZA's *in situ* conservation activities; and
- To improve the image of EAZA in its external environment.

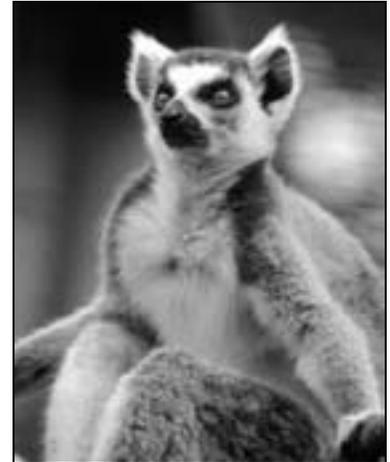
In order to safeguard the highest standards among members and in coordinated efforts, EAZA should take steps to fully comply with the ethical standards it has set, to improve the quality and efficiency of EEP programs, and to implement serious measures to address non-compliance. In this light it is important to note that EAZA has introduced a new accreditation procedure after more than two years of development and discussion among the members.

To improve the operation of the organization a strategic plan needs to be developed in which EAZA defines the major objectives for the next 4-5 years. To accomplish this goal, EAZA is planning a strategic workshop in April 2001 when the Council meets at Zooparc Beauval (France), with input from committee chairs and representatives of the various national zoo federations. More attention must be paid to the needs, demands and interests of the aquarium community, an important portion of our EAZA membership.

It is vital that the tasks, products and relationships between EAZA committees, national zoo federations and the EAZA Executive Office are clarified. There are two options for the development of EAZA operations: to build a large central bureaucracy, or to request more members to play a more direct role in European level tasks. With the second option, some

tasks can be delegated to the level of individual institutions as appropriate.

The move onto the Internet is unavoidable. Further development of the EAZA Information Centre to facilitate the handling of the membership



database, (inter-)national animal exchanges, studbooks, collection plans and other coordination tasks, must not be delayed, and will receive EAZA's full attention in the coming years.

Another major task is strengthening cooperation among the European zoos in practical conservation actions. This includes the urgent establishment of a web-enabled database of *in situ* conservation projects of our member institutions and the launching of several EAZA *in situ* conservation projects.

EAZA also needs to improve its image with a number of external groups. European and world-level organizations such as the European Commission and the World Zoo Organization should be targeted. Additionally, it is necessary to improve the image of EAZA zoos within the international conservation community (e.g., CITES, IUCN, WWF) and to create new working partnerships within this community for *in situ* conservation and conservation breeding projects. And, last but not least, EAZA needs to establish a correct and balanced dialogue and promote cooperation with reasonable animal welfare organizations whenever feasible. EAZA's Bushmeat Campaign, successfully launched in September 2000, demonstrates that this kind of cooperation is feasible.

The new century finds a strong and capable pancontinental zoo and aquarium association in Europe. EAZA has become the largest zoo organization of the world, currently embracing 281 members from 34 countries. More than 15,000 staff-members work in these institutions, among them about 1,000 professional biologists, conservationists, and veterinarians, interacting with about 125 million visitors annually. EAZA must use this potential well in the interest of a diverse life on Earth. 🐾

Submitted by Köen Brouwer, EAZA.

FZG British Isles Regional Report



The Federation of Zoological Gardens of Great Britain and Ireland (Federation of Zoos), a registered wildlife charity, is the professional body representing 60 zoological institutions in Britain and Ireland. The past year (1999/2000) has been exciting and progressive, encompassing many diverse activities in conservation, education, research, publication, administration, partnership development, ethical issues, public relations and legislation.

Partnership Development

- **Bushmeat.** Through appointments to the Tropical Forest Forum and chairing of the EAZA Bushmeat Working Group, the Federation has contributed to the bushmeat debate. During the past 12 months, the Federation has contributed to this working group via the director's participation as the UK Nation Coordinator for the EAZA Bushmeat Campaign and media advisor for the Pan-European Campaign.
- **English Nature.** English Nature is a government-funded UK Statutory Advisory Body that is responsible for the conservation of native species and habitat in England. FZG has been working since 1996 with English Nature on the conservation of native species through a range of *ex situ* programs that are part of the UK Biodiversity Strategy. This relationship was strengthened this year through a new partnership agreement relating to the UK Biodiversity Action Plans and a joint Conservation Education initiative involving zoos, English Nature and schools.

Legislation

A significant focus of FZG's work related to legislative issues, which are of fundamental importance to the future of the zoo community in the UK and Europe.

- **EU Zoos Directive.** The European Union's *Zoos Directive* entered into European Law on 9 April 1999, requiring Member States to establish national systems for the licensing and inspection of zoos. The purpose of the directive is to assist the European Union in meeting its conservation obligations under the Convention on Biodiversity (CBD) and to strengthen the existing conservation and educational role of zoos. To assist with the implementation of this directive, senior representatives from 12 EU Member States attended a seminar in March 2000 focusing on the role of EAZA and of zoos in conservation, education and research.

- **Zoo Licensing Act and SSSMZP.** The Federation contributed to the revision of *The Secretary of State's Standards of Modern Zoo Practice (SSSMZP)* that form the core of the Zoo Licensing Act (1981), the legislation that governs the UK zoo inspection and licensing system. Further legislative contributions included the appointment of the Federation's Chairman and Director to the Zoos Forum, a new independent body appointed to give impartial advice to the government on zoo-related issues. In addition, much effort was devoted to communicating the interests of FZG and its members to government officials and ministers.

Conservation

The Federation's conservation work is overseen by the Conservation and Animal Management Committee (CAMC). Nick Lindsay retired as Chair in March 2000 and was succeeded by Bryan Carroll. The major issues addressed by the committee and subgroups included:

- **Animal Transaction Policy:** The 12-month trial was successfully completed and the document was issued after revision. An annual review will be undertaken by the end of 2000.
- **Federation Policy and Guideline Documents:** The Falconiformes Animal Husbandry Guidelines, Guenon and Birds of Prey Flying Demonstration Guidelines were published in 2000. The Transponder Guidelines were reviewed and updated following a CITES resolution in April 2000; a Transmissible Spongiform Encephalopathy Guidelines document was completed; and documents on the keeping of great apes, contact animals and elephant management were initiated.
- **Guidelines Editorial Group:** This group continues to supervise the production of Management Guidelines through the TAGs to ensure consistency of standards.
- **Research Group:** Since its revitalization in 1999, this group has convened two research symposia (proceedings available) and produces a quarterly email research newsletter, as well as identifying appropriate research projects for FZG members. Furthermore, a survey has been conducted to collate historical and ongoing research projects within Federation member collections, the findings of which will be published in 2001. Lastly, the group has drafted Guidelines for Sampling, which is scheduled for circulation in 2001.
- **EEP Committee:** Strong liaison continued, and the Chairs of CAM and JMSC attended the EEP Committee meetings during the year.
- **Annual Conference 2000:** The Federation's 2000 Annual Conference was hosted by Thriby Hall Wildlife Gardens in Norfolk, and focused on the theme of nutrition in zoo animals.

- **Conservation Coordinator:** Mairéad Farrell commenced in post on 2 October. This appointment brings the FZG office back up to full strength and will provide greater support to the TAG chairs and JMSP.
- **TAG/JMSP Development:** All TAGs are fully integrated with their European counterparts, with some B&I TAG chairs also having the more onerous task of running both operations. With much of the collection planning process now being tackled at this higher level, the B&I TAGs are now addressing more fundamental husbandry issues while remaining a forum for communication information about the “bigger picture”.
- **Training Programs:** ARKS4 training courses are planned for spring 2001. Institutional collection planning workshops are also being planned to assist Federation members to comply with collection planning requirements at national and regional levels.
- **Collection Planning & REGASP-LINK:** The Federation was represented at the REGASP and REGASP-LINK Planning Workshop in Minnesota in August 2000. Action points for FZG and EAZA were identified for the implementation of REGASP and ‘The Link’ in the European Region.



- **Liaison with EEP Programs:** Bryan Carroll and Neil Bemment attended the EEP Committee meetings held in Stuttgart in June and Aalborg in September, at which the working procedures for EEP coordinators were discussed. Many British and Irish coordinators were present at the 2000 EEP hosted by Aalborg Zoo, reflecting the B&I region’s continuing support for the development of EEPs.

Education

In September 2000, Simon Garrett succeeded Stephen McKeown as Chair of the Education Committee. Under the guidance of the Education Committee, the following activities ensued:

- **Regional Workshops:** The successful revival of the Regional Coordinators’ network gathered momentum in 2000. A series of workshops and discussion groups convened across the country to generate ideas for the annual Federation campaign and further develop themes from the annual Education Conference, the British and Irish Zoo Educators Conference (BIZE).
- **1999 BIZE Conference:** This year’s conference was held at Fota Wildlife Park in Ireland.
- **Guidelines for Education Standards:** The Guidelines for Education Standards in Member Collection of The Federation of Zoological Gardens of Great Britain & Ireland were ratified at The Federation’s AGM in May 1999 and implemented in 2000.
- **Education Show:** The Federation provided a display at the Education Show at the National Exhibition Center in March 2000.
- **Zoo Animal Management Course:** A separate chapter on education was included in the revised Zoo Animal Management Course.
- **BIZE Newsletter:** Bristol Zoo Gardens financed the production and distribution of the educators’ newsletter, which ensures that all educators are kept in touch with current affairs in zoo education.

Marketing and PR

This was a productive year for the Marketing and PR Committee. Activities included organizing a seminar at Marwell Zoological Park designed to address topical and controversial issues and provide advice and updates to assist PR staff. The Primate Campaign was successful in raising public awareness about the plight of great apes, and funds raised will be donated to the Cameroon Wildlife Aid Foundation and the Lion Tamarins of Brazil Fund.

National/Regional/International Organizations

FZG is a member of the following organizations: European Association of Zoos & Aquaria, World Zoo Organization, Conservation Breeding Specialist Group, World Conservation Union and the IUCN-UK Committee. The Federation is represented on the International Zoos Seminar and at meetings of the Wildlife Information Network’s Wildlife Welfare Advisory Support Program. Finally, FZG was engaged in public debate on a number of issues, including rights for great apes, elephant management practices and FSE in big cats. Awareness of the Federation, its objectives and activities, was maintained through a series of public statements and press releases. 🐾

Submitted by Mary Talbot-Rosevear, FZG.

PAAZAB Regional Report



The African Preservation Programme (APP) is a cooperative conservation management program administered by a standing subcommittee of PAAZAB. Taxon coordinators are Ferdi Schoeman (mammals), Karl Westphal (birds) and Dave Morgan (reptiles/amphibians). APP objectives are:

- To foster the conservation and management of species for long-term viability through coordinated maintenance of genetic variation and demographic stability;
- To coordinate efforts to develop effective methods of husbandry and propagation of species; and
- To develop partnerships with wildlife agents in the management of species.

Meetings

In November 1999 a meeting was held at the National Zoological Gardens, Pretoria for the APP Committee to examine the APP charter and scrutinize and consolidate the current APP programs. An important decision made at this meeting was to include non-African (exotic) species for APP programs.

A brief meeting was held during the Annual PAAZAB Conference in May 2000. A full report on APP activities during the past year was presented to the conference delegates and was open for discussion.

Information Sheet

The APP Committee compiled an Information Sheet on APP studbooks, which was distributed to PAAZAB members in the hope of attracting additional studbook keepers and species coordinators.

African Mnemonics

During the past decade a few hundred mnemonics have been created for the African region, the majority of which are not yet recognized by ISIS. This understandably causes problems, and thus the data submitted via ARKS and SPARKS cannot be used to link animals as they move from one site to another. Through APP, a list of 330 mnemonics was compiled by Ferdi Schoeman and published in September 2000.

Studbooks & Conservation Programs

Since not all zoological institutions in our region are members of PAAZAB and some members prefer to run their own breeding/conservation programs, there are a limited number of members available for studbook compilations. The APP still managed to produce

16 studbooks during the past year (3 reptiles, 8 birds, and 5 mammals). Studbooks are also being prepared for several other species. Following are brief reports on a few of our APP conservation projects:

African wild dog (*Lycaon pictus*)

There are currently 283 living dogs in the studbook, an increase from 169 in 1998. A highlight of the past year was the successful release of male captive-bred dogs along with female wild-caught dogs into the Pilanesburg Game Reserve. A new database is being collated in conjunction with the Wild Dog Action Group that will include all wild dogs, captive and free-living.

African wildcat (*Felis silvestris lybica*)

DNA studies are being conducted to determine this species' true identity because it hybridizes with the domestic cat. A number of specimens have been obtained from the wild, and a studbook and breeding program have been established, aiming to reintroduce this species into suitably protected areas.

Southern bald ibis (*Geronticus calvus*)

Only two PAAZAB institutions are currently breeding this species, which is endemic to southern Africa and listed as vulnerable in the 2000 Eskom Red Data Book for Birds in South Africa, Lesotho and Swaziland. The National Zoological Gardens has an active breeding program with 22 hatchings during the past year.

Blue/Stanley crane (*Anthropoides paradiseus*)

The current studbook lists 234 living birds in captivity at 53 locations in southern Africa. Since 1990 this species has shown a steady growth in captivity.

Wattled crane (*Bugeranus carunculatus*)

Initial genetic studies have indicated that the South African population is distinct and that efforts should be made to preserve it. This has resulted in the launching of a breeding program for this endangered species and compilation of a studbook. 🐾

Submitted by Ferdi Schoeman, APP Chair, PAAZAB.



SEAZA Regional Report



SEAZA is made up of about 90 zoos in the following countries: Singapore, Malaysia, Indonesia, Thailand, Philippines, Cambodia, Vietnam, Laos, Brunei, Burma, Honk Kong and Taiwan. Last year's annual conference was held in Saigon, Vietnam in September 1999. The next conference will be held in Philippines in January 2001, followed by a conference in Malaysia in November 2001 and then a joint ARAZPA/SEAZA conference in June 2002.

The most fundamental building block of *ex situ* conservation is record keeping; the second is animal husbandry. In other words you need to know what you have and how to display it. Without these basic skills, the messages that come down from the World Zoo Organization – that of ensuring that our visitors are imparted with environmental conservation messages – are meaningless.

Thus over the years our main thrust has been training. With four generous annual grants from the World Zoo Organization amounting to US\$35,500 and utilizing some SEAZA funds, we have conducted six courses and trained 117 participants. These courses revolved around the Zoo Biology and Management Course and Animal Record, Identification and Restraint Course held in Singapore, Malaysia, Thailand and Indonesia. Soon we shall be holding a 10-day Animal Enrichment Course in Thailand.

We are grateful to ARAZPA and the RSPCA for donations toward the SEAZA Relief Fund and Animal Welfare Funds. Donations were used to purchase veterinary medicine for the PKBSI (Indonesian Zoo Association) and to conduct accreditation checks on member zoos by our Ethics and Welfare Committee.

We are looking forward to a South Asian Educators Training Course being organized by Sally Walker and to be held in Singapore early next year. Funding will be provided by the Singapore government.

Our contributions to conservation awareness have been fairly high, launching two campaigns this year on Discovery Channel and Animal Planet to help Save the Sumatra Rhino (with SOS Rhino and the Asian Rhinoceros Specialist Group) and with Asian Conservation Awareness Program (ACAP) to save the sharks. The latter was a fascinating campaign, trying to get the Chinese to stop eating shark fin soup. Jackie Chan has been a mentor to these ACAP programs.

We sent a team to help with the rescue of the jack-ass penguins affected by the oil slick off the coast of South Africa earlier this year.

At last year's WZO conference the keynote address was delivered by the zoo world's spiritual leader and voice of our collective consciences, Bill Conway. In an extremely eloquent and thought-provoking speech entitled 'The Changing Role of Zoos in the 21st Century', Conway noted that with ever increasing habitat destruction and alarming rate of species loss there is a need for the zoo world to be far more proactive about environmental conservation, both *ex situ* and *in situ*. Conway's plan of action is three-fold:

1. To refocus our interpretation and environmental messages by directing them at adults and especially decision-makers regarding the impending environmental catastrophes and specific conservation issues.
2. To help sustain wildlife in nature in the years ahead by helping sustain wild lands, reserves and species.
3. To ensure that every new animal exhibit built in our zoos contributes to conservation: either financially, educationally or through propagation.

Conway ended by stating that the developed world pays too little attention to the developing countries, most of which are on the front lines of the Earth's most diverse habitats. Thus the zoo world's vision for the 21st century should be to become proactive in working with and giving aid and support to national parks and reserves where there is the greatest biodiversity and to sustain animals which have lost their habitats and conduct campaigns to restore them.

To select relevant *in situ* projects for WZO involvement, it was decided that CBSG would assist by conducting a series of workshops to establish such *in situ* projects. These workshops will focus on the three regions with the current greatest biodiversity – Asia, South America and Africa. The regional zoo organizations in each of these areas will be supported by regional zoo organizations from the developed world. Thus, ARAZPA and JAZPA would support Asia, the AZA would support South America and EAZA would support Africa.

The Asian zoo world is represented, at the WZO level at least, by the following organizations: SEAZA, SAZARC, JAZPA and CAZG. We shall also be conducting an Asian *in situ* conservation project identification workshop, conducted by CBSG in Thailand in June 2001. 🐾

Submitted by Bernard Harrison, President, SEAZA.

CBSG, South Asia Report



Many people (even those who live there) do not know that South Asia and South East Asia are very different regions. South East Asia refers to Singapore, Malaysia, Indonesia and all countries in that area. South Asia consists of Bangladesh, Bhutan, India, Maldives, Nepal, Pakistan and Sri Lanka. As you can imagine, there is a vast amount of biodiversity in this region, with two recognized “hot spots” and a score of other biologically wealthy areas.

For almost 15 years Zoo Outreach Organisation, which has hosted CBSG, India since 1991, has been working in India with occasional contacts with other countries of South Asia. Within the last two years, CBSG, Sri Lanka was convened, and there was great interest from Nepal and Pakistan in having their own network. Last year we created a larger network for South Asia to help these countries form their networks and to coordinate and integrate their activities.

CBSG, South Asia

In this rich area there are more than 300 zoos of various sizes and descriptions:

- Bangladesh:** 6 (1 large zoo; 5 small/medium zoos)
- Bhutan:** 1 (breeding center)
- India:** ±250 (54 zoos; 200 mini-zoos & deer parks)
- Maldives:** None
- Nepal:** 5 (all small zoos)
- Pakistan:** 40 (many are breeding centers)
- Sri Lanka:** 3 (including 1 elephant orphanage)

Of these zoos, those in India operate under a system of legislation, standards and inspection, and have training, coordination and other facilities. India has the Central Zoo Authority, a Zoo Act, a National Zoo Policy, an Indian Zoo Directors Association and a zoo NGO – Zoo Outreach Organisation. Although there are many obstacles, Indian zoos have made progress and have contacts in the international zoo community, but most of the zoos in the surrounding countries have been completely isolated. This region has not been able to function as some others, such as SEAZA in South East Asia or ARAZPA in Australasia.

One of the very real problems of attempting to coordinate the region was money for communications and travel. Air travel and communications among these countries is as costly as traveling to other regions of the world. One of the reasons for establishing

CBSG, South Asia was to provide a mechanism for zoo personnel of the region to meet one another and perhaps establish a regional zoo association.

CBSG, South Asia, with experience from CBSG, India, can also catalyze and coordinate workshops and training for South Asian zoo and wildlife staff, produce a newsletter, and coordinate transnational boundary information for PHVA and CAMP workshops. The link between zoo and field-based conservation activities, promoting holistic conservation management, can be more easily highlighted by CBSG, South Asia, and a regional conservation identity established.

This year CBSG, South Asia organized a series of meetings in August so that these and other objectives could be carried out. The Central Zoo, Kathmandu was selected for the meeting site due to a variety of reasons, including the neutrality of the country and the presence of cooperative and interested management (King Mahendra Trust for Nature Conservation).

The first meeting brought together 22 zoo personnel from five countries to discuss the problems and potential of South Asian zoos. An association was formed called the South Asian Zoo Association for Regional Cooperation (SAZARC). A gala function was held with the Prince of Nepal and Ulysses Seal to inaugurate the First Regional South Asian CBSG meeting and the inauguration of CBSG, Nepal. CBSG facilitated a meeting with wildlife experts from several countries along with the zoo personnel to isolate regional problems and commit to achievable actions.

All of the attending zoo personnel, including several directors, veterinarians and educators, then participated in a Zoo Education Training Workshop initiated by the Asian Regional Network of International Zoo Educators (ARNIZE) and staffed by ARNIZE, ZOO, Central Zoo Education Department, Nepali and Indian resource persons. The core committee of SAZARC met and accepted the invitation to hold the SAZARC meeting and CBSG, South Asia meeting in Colombo and Periydenia, Sri Lanka.

CBSG, India

Sanjay Molur, Zoo Outreach Organisation Programme Officer, is now the coordinator of CBSG, India. During the year the CBSG, India taxon networks organized the following activities:

- An Orchid CAMP, which assessed 102 species of orchids of the Western Ghats sponsored by Paignton Zoological and Botanical Gardens and held at the Institute for Forest Genetics and Tree Breeding.
- A Field Techniques, Taxonomy, and Conservation of Chiroptera training workshop sponsored by Chester Zoo at the Madurai Kamaraj University.

- A training workshop on Captive Husbandry and Field Techniques for Amphibians at the Arignar Anna Zoological Park sponsored by the AAZK Chapter of Minnesota Zoo and the Melbourne Zoo.
- A Giant Grizzled Squirrel PHVA is planned for late 2000 or early 2001.

CBSG, Sri Lanka

Anslem De Silva and Jayantha Jawardene will be organizing a PHVA for the Asian elephant in Sri Lanka in June 2001.

CBSG, Pakistan

A. A. Chaudhery, Pakistan Wildlife Department, and Arshad Toosey, Director, Lahore Zoo are the likely Convenors for CBSG, Pakistan and will organize a PHVA for urial in March 2001.

CBSG, Nepal

Ang Phuri Sherpa has been appointed as the CBSG, Nepal Coordinator by Convenor R. K. Shreshta. A Wild Buffalo PHVA is planned for June. 🐾

Submitted by Sally Walker, CBSG, India.

CBSG Japan Report



CBSG Japan was established in February 1997 with 33 Japanese members. There are 40 members as of October 2000.

Sumatran Tiger in Indonesia

In 1997, at the request of CBSG Indonesia, CBSG Japan became involved with the rescue of Sumatra tigers from forest fires in Sumatra, Indonesia. Subsidies were provided by the Japan Environment Corporation (a departmental organization of the Japanese government) for three years from 1998, allowing us to visit the Sumatra Tiger Preservation Center at Taman Safari Indonesia in Bogor twice per year to conduct veterinary evaluations. In September 2000 we examined the vitality of tiger sperm collected from two male tigers. We also gave a donation to the project for the construction of a Nature Environment Education Center. These activities have been conducted mainly by CBSG Japan, in cooperation with members of the Asian Wildlife Conservation Association.

Iriomote Cat

In December 1999, Dr. Hori gave a presentation about the Iriomote cat at the International Small Felid Workshop in Las Vegas, USA. Iriomote cats are listed as a Natural Monument in Japan. Only 100 individuals remain in the small Iriomote islands, which cover 130km from south to north with total areas of about 284km². The number of cats has been decreasing, suffering from tourism and disease from domestic cats.

The Japanese government does not allow the keeping or breeding of wild species in *ex situ* condition. However, we need to convince them in order to protect this species. The government tends to act slowly; for example, they decided to protect the Japanese ibis only when one bird remained, which was too late.

Giant Panda

As leader of CBSG Japan, Hiroshi Hori has been working with the giant panda project between China and Japan since 1988. Along with the JAZGA President and Director of Ueno Zoo, he attended the meeting for the acquisition of giant pandas for Japanese zoos, and visited Wakayama Zoo in order to observe their facility and husbandry practices.

In November 1999 Dr. Hori attended a meeting at Kobe Oji Zoo, where a giant panda exhibit was planned. In July 2000 Adventure World Wakayama and Kobe Oji Zoo obtained giant pandas from China. The female panda that was sent to Adventure World Wakayama was already pregnant and delivered a cub after arriving in Japan.

Sumatran Elephant

CBSG Japan supported the Sumatra Elephant Workshop held in Indonesia in April 2000.

Future Activities

By the deadline of supporting Sumatra Tiger 2001, we are planning to host an Asian Wild Cat Workshop in Japan in March 2002. In developing the agenda, we will ask many people, not only zoo people but also specialists from universities and research centers. 🐾

*Submitted by Hiroshi Hori,
CBSG Japan.*



CBSG Mesoamerica Report



A year is a long time to have conservation activities and to convince others to start working in this field. One of the main advances during this time was that Sonia Alpizar, a biochemistry student, started supporting us in our office at Simon Bolivar Zoo.

August 1999

We organized and facilitated a PHVA workshop for the squirrel monkey (*Saimiri oesterdii citrinellus*), an endemic species that lives at Manuel Antonio National Park, Costa Rica. Workshop participants included persons from the community, park staff, university teachers, governmental authorities, NGO representatives and Simon Bolivar Zoo staff. Work conducted since the last PHVA workshop held in 1995 was reviewed, the actual situation of the species and its habitat was analyzed, and a strategic plan for the next five years was established. The workshop and the following work has been supported by the Philadelphia Zoo.

September 1999

During this month, Yolanda Matamoros attended the AZA Annual Meeting hosted by the Minnesota Zoo and met with CBSG staff to plan several activities in the region for the next year.

November 1999

Yolanda Matamoros attended the 160th Anniversary ceremonies of La Habana Zoo. She also assisted CBSG in facilitating the IV Cuban Fauna CAMP at La Habana Zoo.

January 2000

CBSG Mesoamerica supported the communications for the Crocodile PHVA held at Youth Island, Cuba.

March 2000

CBSG Mesoamerica assisted in the organization of the first Dominican Republic CAMP that was held at the National Zoo at Santo Domingo during March. This was the first experience for the Dominicans, who were very enthusiastic during the workshop. Fifteen species were evaluated by 42 participants from 20 different institutions.

May 2000

Sonia Alpizar began working with CBSG Mesoamerica. During this month we worked on the translation of the new Taxon Data Sheets and the CAMP database from English to Spanish. Other activities included organization of the III Mesoamerican and Caribbean Zoo and Aquaria Association (AMACZOOA) Congress and the Red Lists Workshop as well as editing the Dominican Republic Fauna CAMP report.

June 2000

We attended the III AMACZOOA Congress, held at Zoologico Nacional de El Salvador with the participation of CBSG. CBSG facilitated a Future Search Workshop for the association. Also attended was the Red Lists Workshop, held at the University of Costa Rica in San Jose. More than 200 species were analyzed by more than 70 participants.

July/August 2000

TDS information was entered into the electronic sheets, and the software translation was reviewed with the support of John Williams. Species distribution information was also entered. Yolanda Matamoros participated in the CBSG Future Search Workshop at White Oak, Yulee, Florida, in August. 🐾

Submitted by Yolanda Matamoros, CBSG Mesoamerica.

CBSG Regional Offices & Contacts

CBSG India	Sanjay Molur
CBSG Indonesia	Jansen Manansang
CBSG Japan	Hiroshi Hori
CBSG Mesoamerica	Yolanda Matamoros
CBSG Mexico	Amy Camacho
CBSG Nepal	Ang Phuri Sherpa
CBSG Pakistan	A. A. Chaudhery Arshad Toosey
CBSG South Asia	Sally Walker
CBSG Sri Lanka	Anslem deSilva

Invertebrate Working Group Report



Although very useful *ad hoc* discussions were held throughout the three-day conference, the formal group session was convened on the last day of the meeting so as to allow maximum participation on other highly relevant working groups. This strategy proved to be most productive and will no doubt set the pattern for future meetings. The main areas discussed are summarized below.

Regional Working Groups

Ongoing efforts to develop a comprehensive regional working group support network remain a priority for the coming year. For regions where invertebrate TAG groups (or equivalents) already exist (e.g. ARAZPA, EAZA, AZA and Japan) it has been a relatively easy task to mesh into these existing structures. Where no such invertebrate groups currently exist the challenge is much greater. Therefore, efforts need to be concentrated on the regions that do not currently have well-developed invertebrate TAGs. There has been positive progress in South Asia. The task of realizing an active and cohesive global network of invertebrate colleagues will be made much easier with the completion of the web-enabled invertebrate database.

Invertebrate Conservation Database

Given the need for assisting the development of the regional group network, the completion of the web-enabled database remains the most useful action over the coming year. After further discussions with ISIS and EAZA it was agreed to reduce the detailed taxa logging elements to a more basic level and focus on the contact directory, species guideline materials and newsletter elements. This strategy would also allow more time to be devoted to the upgraded *Partula* studbook and related group-management and analysis work.

Partula Snail Program Developments

Studbook database upgrade. The international studbook is currently being upgraded to the Windows operating system and will have a more intuitive and efficient method of data entry. There will also be an extensive reporting tool allowing collections to efficiently access data and conduct detailed analyses across collections. Data will be easily downloadable with a single menu selection. The data archive system will be included in the software that will, at the start of each month, upload the database to the central server.

The data archived centrally will be analyzed on a regular basis and the results reported back to the collections via the Internet. There will also be relevant contact and husbandry guideline elements. This upgrade is being developed in close collaboration with ISIS colleagues.

Revision of husbandry guidelines. The husbandry guidelines are in the process of being revised. This will involve an analysis of enhanced survivorship results for all the taxa across the holding collections in the US and Europe.

New holding collections. One new collection has been established in the UK and starter groups are in the process of being allocated for Parc Zooloique de Thoiry (France), Plzen Zoo (Czech Republic) and Shinshu University (Japan).

Memorandum of Understanding. It was agreed that we need to seek further advice from IUCN as to how we might best establish a formal Memorandum of Understanding with range area authorities.

Potential New Program Candidates

Fregate Island beetles (*Polposipus herculeanus*).

This beetle (the world's largest tenibrionid species) is endemic to the Seychelles island of Fregate and has a Critical IUCN Red List status. The principle threat is introduced rats that arrived on the island in 1995. In partnership with Birdlife Seychelles, field collected specimens were collected for the establishment of a breeding and research program at the London Zoo. The species is easy to propagate, with the F3 generation being recently achieved. Numbers have grown to a degree where it has been possible to send starter groups out to three other institutions in the UK and Poland. The breeding groups are providing life history and health data of direct relevance to field conservation efforts. These beetles make excellent exhibit animals and can tell a powerful educational story. The current program also includes the Fregate endemic Eniid snail (*Pachnodus fregatensis*) and the world's largest millipede (*Sechelleptus seychellarum*), both of which have proved equally feasible species to maintain, requiring little keeper time. In view of the high level of species threat, together with the fact that there is a well-established *in situ* program partner, this species is a strong candidate for elevation to program status.

Theraphosid spiders (mixed spp). Further clarification is needed on the *in situ* status of any potential program taxa before we can make any informed comments

or recommendations. However, these spiders are a high profile group and a significant trade issue. Because of the extensive number of spiders in collections there is a pressing need to better understand the composition of these captive populations. This may require a questionnaire to holding institutions, as well as gathering a better understanding of the impact that trade may be having on the *in situ* populations.

Invertebrate Nutrition Research Needs

Extending our understanding of the nutritional requirements of invertebrates and making resultant refinements to existing diets is recognized as a pressing research need. Pulling together what data are currently available on invertebrate dietary needs is an important first action requirement. Initial target groups are the Mollusca, Coleoptera, and Orthoptera, as these are the most represented groups in current program work. Any contributions from colleagues in this key welfare area would be greatly appreciated.

Furthering Input on Related SSC Groups

We discussed how we might best assist the SSC Specialist Groups in the coming year. The identification of focal individuals in all regions is a major progress point that requires follow-up. The next six months will be a key period for becoming involved in the SSC reconstitution phase in line with the four-year triennium. This reconstitution period provides invertebrate colleagues with an opportunity to examine the potential for involvement with all Specialist Groups. Other relevant opportunities include the following:

- Participating in the current review process of the effectiveness of existing Species Action Plans.
- Providing much needed data to CITES invertebrate case reviews, including related trade data and the potential of developing *ex situ* options. Each species proposed for inclusion on the CITES list ideally requires the input of 10 experts on that species. In the case of invertebrates, it is often hard to identify such expertise for this evaluation process. It was also stressed that we should collaborate with Traffic as fully as possible when attempting to address illegal trade issues (e.g., Theraphosids). The Invasive Species Group was seen as good model for us to examine in terms of how it provides valuable and swift information. 🐾

*Submitted by Paul Pearce-Kelly and Ed Spevak,
Working Group Convenors.*



Elephant Working Group Report



EAZA

EAZA continues to develop elephant population management plans. The EEP now advises government bodies on the placement of confiscated elephants.

Guidelines are under preparation for elephant care. A first draft was prepared several years ago and will be useful as a basis for new guidelines. Publication of a husbandry manual is planned for 2001.

EAZA recommendations for elephant movement are leaning to the transfer of groups of cows, and trying in the long run to transfer bulls rather than cows. This is slowly happening, the first steps being to identify institutions that can take bulls and also to identify disease risks. These will be written into the protocols.

EAZA is planning a meeting to bring together SSC Specialist Groups and regional program representatives to discuss international policy on elephant management.

JAZGA

Japan has guidelines that have been developed through the zoo association. Elephant managers meet once a year. The biggest issue at present is that the Asian elephants are not breeding. Consideration is being given to exchanging female elephants, although there are big problems associated with the transfer of elephants and training of keepers. There are also issues associated with ownership.

The current captive population consists of 51 Asian elephants and 63 African elephants. Handling techniques are approximately 50% free contact, 50% protective contact. Keepers do have accidents and there have been some deaths. Consideration is being given to how keepers are trained. Currently each zoo has a different way of training keepers and there are a wide variety of training systems.

AZA

The AZA Board has made a series of decisions regarding elephant management and is now working on an implementation plan. A preliminary draft of guidelines will be sent soon to AZA members for comments.

The AZA Board has now developed full participation in the SSP process and has also developed a conflict resolution process to deal with problems that may arise over short-term needs of institutions and long-term needs of populations. Institutions can state at what level they wish to be involved with SSPs – as institutions holding elephants, supporting the program, or actively breeding elephants.

AZA has given the SSP funding to develop an action plan – a set of projects designed to address critical husbandry issues and establish a stronger connection between zoos and *in situ* conservation.

PKBSI

In Sumatra there are approximately 400 elephants held in six training centers, usually captured due to human/elephant conflict. Although these animals are trained there is not enough work to keep them occupied. Health and husbandry care is minimal. There are approximately 120 elephants in Indonesian zoos, with 50 maintained at Taman Safari Indonesia.

In seven years the number of wild elephants has decreased by approximately one third. In 1993 a PHVA estimated that there were 3,600 – 4,500 elephants, and a recent report indicated that the numbers have dropped to 2,400 - 3,500.

Indonesian political control has become decentralized, and there is still serious unrest in some regions. This has led to confusion regarding the administration of international funds and support for elephant programs. As a result, the Elephant 2000 Workshop was held in April 2000 in Cisarua-Bogor. Over 100 participants attended this workshop from eight countries, representing central and local government, the Elephant Training Centers, local and international NGOs, and the zoo community. One of the recommendations was to establish an Elephant Fund (NGO) to encourage coordination and collaboration between international programs to prevent overlap of activities.

FZG

In January 2000 the Federation of Zoos called a meeting of institutions holding elephants. Seventeen collections were represented and 25 individuals attended at both managerial and keeper levels. There was a review of the last 10 years of elephant keeping and of the progress from a policy developed in 1991 as to the “whys” of keeping elephants.

Two areas were identified as needing clarification and protocols/policy statements. Chris West of Chester Zoo was tasked to develop two documents: 1) the political issue of why and how elephants are kept (including handling techniques and educational uses); and 2) detailed husbandry guidelines.

Attached to the political document is also a status report of the UK breeding population as it relates to the EEP. More cows appear to be cycling within the UK, and transfer of animals among zoos is being considered.

ARAZPA

Peter Stroud at Melbourne is the coordinator of the elephant program.

The development of a properly integrated elephant management program is ongoing. The space available to hold elephants in Australasia is small with places for only 15–20 animals in four institutions. As a result, it is recognized that breeding elephants might lead to a surplus problem – particularly of bulls – and this issue still needs to be resolved.

The aim now is to keep a small breeding population of Asiatic elephants that would integrate with breeding programs underway on other continents. There was no suggestion of need to breed elephants for reintroduction programs, and so which subspecies to manage is not an issue. It has been resolved that elephants will be managed at a species level in Australasia.

A central keeping training facility is being developed to encourage common standards. Currently recommended management techniques are “free contact” for managing cows and “protective contact” for bulls. Originally there was a commitment from all zoos with elephants that they would be able to hold bulls. However, this may prove difficult for some zoos. As a result, the issue of managing surplus bulls may be more difficult.

There are specific attempts to link institutions holding elephants with elephant conservation projects in Indonesia to support *in situ* conservation and welfare programs.

There will be a need to import elephants to set up a breeding program. Initially it was assumed that there was a need to relieve pressure on elephant orphanages and so that was considered as a useful source of animals, but now this is being questioned and the situation is under review.

Actions

The working group agreed upon the following actions:

- Continue to share information between institutions and regional programs;
- Continue to encourage collaboration between regional zoo associations and their cooperative breeding programs; and
- Bring together the editors of the numerous manuals currently under development to allow for information exchange before the documents are finalized. 🐾

Submitted by Michael Hutchins, Working Group Convenor.



Global Cheetah Conservation Working Group Report

Working group participants were asked to identify their personal goals for this working group. The common overall theme was the need for a global master plan to solve problems both *ex situ* and *in situ* and to link the two.

Goal Statement

Recognizing the achievements that have led to establishing the cheetah as a model for integrated conservation, we will convene a workshop to design a global cheetah conservation action plan. This workshop will aim to include representatives from all range countries to develop guidelines for responsible international management that benefits the cheetah, its natural ecosystem and local human communities. Using a multidisciplinary, scientific approach that looks to future action, the plan also will focus on developing a strong, self-sustaining international *ex situ* program that is united with and enhances *in situ* programs.

Questions To Be Answered

1. Is the genetic diversity in the global population sufficient to warrant breeding for genetic diversity? (vs. health, behavior or reproductive success)?
2. Can husbandry factors be identified that promote breeding success and health?
3. Would the removal of barriers to international movement assist the *ex situ* population to be self-sustaining?
4. To better understand the factors that promote cheetah welfare, should the global *ex situ* population be maintained as a research population?
5. Should cheetahs be managed as a metapopulation?

Numbers of Cheetahs in Captivity

<u>Region</u>	<u># Facilities</u>	<u># Cheetahs</u>
Southern Africa	58	448 (34%)
Europe	77	311 (24%)
North America	67	261 (20%)
Asia (mainly Japan/Thailand)	25	124 (10%)
Great Britain/Ireland	13	54 (4%)
NE Africa/Mideast/India	15	34 (3%)
Central & South America	8	33 (3%)
Australia/New Zealand	7	27 (2%)
Other (unknown)	2	4 (<1%)



- How can we best document the distribution and trend of the wild populations of cheetah, using comparable methods?
 - How can non-releasable animals be managed to enhance their contribution to the viability of the global population?
 - Can parameters be defined for non-releasable wild caught animals that would identify those animals that should be incorporated into the *ex situ* population?
6. How can the cheetah be used as a model for predator management, assisting in restoring ecosystems and mixing wildlife and livestock management with local communities?
 7. How can we best utilize the charisma of the cheetah to generate more support for conservation?
 - How do economic incentives for conserving species in country enhance species survival?
 - What non-currency exchanges could occur to compensate countries to conserve cheetahs?
 8. How can we best market and promote the general concept of integrated cheetah conservation?
 9. What communication and training needs could be identified to enhance cheetah and ecosystem conservation?

Issues for Discussion

Issues related to *ex situ* conservation include disease problems, low reproductive success, husbandry concerns, record-keeping and genetic management, training, communication and support of *in situ* programs. *In situ* issues include census methodology, population fragmentation, genetic status in the wild, translocation and metapopulation strategies, public awareness, range country training and support, funding for field research, community conservation efforts and human/wildlife conflicts. 🐾

Submitted by Jack Grisham, Working Group Convenor.

Bushmeat Crisis Working Group Report



Frands Carlsen (EAZA) began by summarizing EAZA's Bushmeat Campaign. This campaign is composed of three parts: 1) an education module directed at visitors to EAZA member institutions; 2) a petition against the illegal and unsustainable harvesting of wildlife; and 3) a fundraising effort for selected bushmeat-oriented projects. Mike Hutchins (AZA) then provided a brief overview of the Bushmeat Crisis Task Force and their efforts to address the bushmeat issue in western and central Africa. Once these two initiatives, and others such as CITES and the UK's Ape Alliance, were discussed, it became clear that it would be very useful to link these programs.

We recognize that, while the study of the "bushmeat crisis" is directed primarily toward primates and other species in Africa, this crisis is truly global in scope, affecting a broad diversity of species and countries. Consequently, action to stem this crisis is needed around the world.

Defining the Crisis

The working group identified a list of general issues and concepts that collectively attempt to define the global bushmeat crisis:

- Logging/mining/oil activities and the resulting increase in access to previously inaccessible wildlife areas
- Changes in cultural practices brought about by increased contact with outside influences, increasing affluence, and growing urbanization
- Increasing protein requirements as a result of growing human populations
- Increased marketability of bushmeat
- Absence of effective law enforcement
- Lack of engagement in process on the part of some range country scientists and international scientists
- Wildlife population decline and fragmentation through unsustainable harvest
- Increased risk of disease transmission between humans and wildlife
- Inadequate education of local and external communities
- Ineffective political lobbying as a means of influencing behavior of consumers
- Insufficient protected area management
- Lack of appropriate economic alternatives
- Absence of alternative protein resources

Contributing to the Solution

The group then identified specific activities and competencies that an organization like CBSG can bring to bear on the bushmeat issue:

- Wild population biological data collection, analysis and synthesis
- Human-caused threat identification
- Research and management prioritization
- Local community needs assessments
- Human population data collection and analysis
- Quantitative population risk assessment/population viability analysis
- Development of management recommendations
- Strategic visioning/planning

The following two workshops were recommended by the working group.

CBSG In-Country Bushmeat Crisis Workshop

Purpose: To assess the extent of the bushmeat crisis in a selected Central African country, and to assess the African perspective in order to propose and prioritize alternative solutions to the crisis.

Location: Likely in central Africa, perhaps Cameroon.

Format: A CAMP-style workshop is recommended, in which biological and social data are pulled together on species affected by the bushmeat crisis to assess the current wildlife and human situation, provide alternative management scenarios, and provide a forum for education of managers and decision-makers.

Proposed partners: International NGOs working in the region; industry representatives working in the area (loggers); and local human population organizations (villages) affected by the situation.

Bushmeat Coalition Strategic Visioning

Purpose: To bring together the different bushmeat initiatives around the world – specifically those working groups from EAZA, CITES, AZA, and the Ape Alliance – to craft a strategic plan for addressing the crisis through the pooling of appropriate resources.

Format: The 1999 Strategic Planning Workshop for the Biodiversity Conservation Information System (BCIS), facilitated by CBSG, could serve as a model for the design of this workshop process. BCIS is a consortium of diverse conservation organizations working toward the development of a global conservation database, which parallels the workshop process design and intended workshop outcomes for a "Bushmeat Coalition". 🐾

Submitted by Tony Rose, Working Group Convenor.

Invasive Species Working Group Report

The introduction of alien and/or invasive species throughout the world is a well-documented and scientifically researched phenomenon occurring in ever increasing numbers. Whether accidental or intentional, these destructive introductions are almost exclusively the result of human activities and practices. It therefore follows that the individuals engaging in each of those respective activities can also control the introduction of alien and invasive species.

While there is doubt that many of the historical introductions of alien and invasive species can be reversed easily with any degree of certainty, there is obvious benefit to the world's ecosystems if future introductions can be significantly curtailed or eliminated. It is therefore important to identify activities where such introductions are or could be taking place with the goal of minimizing such introductions by altering how such activities are conducted.

Alien and Invasive Species Workshop

In recognition of the existing roles, responsibilities and expertise of CBSG members, the SSC has asked the CBSG to convene a workshop on the problem of alien and invasive species introductions in non-native habitats. The essential purpose of this workshop will be to generate a recommended "Code of Conduct" for various species user groups. Through the adoption and adherence to this Code by groups that currently contribute to this problem, it is hoped that they will minimize or eliminate alien and invasive introductions throughout the world.

In convening this workshop, it will be important to recognize that the groups who are involved in the transportation and movement of plant and animal species throughout the world represent a broad section of human culture and activity. Therefore, it will also be important to provide for the representation of the groups involved and to identify the relative contribution they will make in solving this major conservation problem.

Despite the fact that exotic species are easily the most evident in zoos and aquariums, accredited zoological institutions actually hold and import very few animals. In addition, accredited zoos and aquariums have in place procedures and practices that are typically included in the institutional animal acquisition and disposition policy that help prevent the introduction of alien and invasive species. Such policies strictly govern the disposition of animals to the wild

and include such management practices as contraception and euthanasia to help ensure that such introductions do not take place. Furthermore, these policies also direct the adherence to local, national and international wildlife laws. Lastly, institutions also adhere to other policies of organizations such as the IUCN.

While policies are in place that help ensure that accredited zoos and aquariums have minimal contribution to this problem, there are many other institutions that do not meet accreditation standards and therefore may not adhere to the practices that prevent undesired introductions. In addition, there are numerous other user groups that may be contributors. A partial listing of such groups would include: non-accredited zoos, aquariums and botanical gardens; government agencies; local agricultural entities; research facilities; commercial breeders and growers; private breeders and growers; pet traders; animal and plant dealers; and the general public. These contributors to the alien and invasive introduction problem could lessen or even eliminate their impact by adopting many of the standards and procedures that are already in use by accredited institutions.

Additional areas that could contribute to this problem but are less known to the CBSG membership include but are not limited to, the following categories: purveyors of illegal trade; inadvertent or accidental introductions; importers for human use; aquaculture and other exotic food farms; and cultural practices.

Proposed Workshop

Recognizing that a meeting encompassing the entire subject of alien and invasive species would be enormous and unwieldy, it is proposed that the subject be broken into a series of workshops. It is proposed that the first such workshop be focused on the issue of introductions that are of an aquatic nature or involve aquatic species. This will be particularly timely as several international organizations interested in captive aquatic organisms are presently focused on developing procedures and practices that support conservation. This first workshop is tentatively set for the summer of 2001. We are currently creating a potential list of participating organizations and individuals, a location for the workshop, and funding sources. 🐾

Submitted by Brad Andrews and Bob Jenkins, Working Group Convenors.



Transponders Working Group Report

Support for CITES Resolution

The working group strongly urges the implementation of CITES Resolution 8.13 (Rev) adopted in 1992, that states:

- “a) Parties, where possible and appropriate, without excluding the use of other methods, adopt the use of implantable transponders bearing permanent, non-programmable, unalterable and permanently unique codes for the identification of live animals.
- b) Parties take into account the findings of the IUCN/SSC’s CBSG regarding the frequency, size, sterility and method of placement of the transponder.
- c) Microchip transponders be implanted where consistent with the well-being of the specimens.
- d) The location of the implanted transponders in each animal group be standardized according to the advice from the IUCN/SSC’s CBSG as detailed in the standards drafted by CBSG in 1990 and amended in 2000. Specialist groups with concerns about the needs of particular species should contact CBSG for consideration of modifications in the recommendations.”

The working group recognizes that the precept of permanent “marking” with transponders is limited by both the availability of transponders and the timing of when the individual was marked, in order to be effective for the uses outlined in CITES Resolution 8.13 (Rev.). So, we recommend that:

- a) Authorized suppliers must be registered and a system must be instituted which links specific transponder ID numbers to said suppliers.
- b) The accuracy of “tracking” identified individuals is limited temporally such that no information can/should be assumed prior to the time of implantation.

The working group also strongly recommends that the ISO Central Secretariat be contacted and strongly urged to resolve and/or make recommendations regarding the current problems of varying standards of systems and compatibility problems, including the need for a reliable transponder reader that can evaluate multiple commonly used systems.

Standardization of Implantation Sites

The working group recommended the following implantation sites (changes and additions to the 1990 guidelines are noted in *italics*).

Fish:

Large (>30cm): left base of dorsal fin

Small (<30cm): coelomic cavity

Amphibians:

Lymphatic or coelomic cavity



Reptiles:

Lizards, sm. (<12.5cm snout to vent): *coelomic cavity*

Lizards, large (>12.5cm snout to vent): lateral left body side anterior to inguinal region

Chelonians: *leg left hind limb socket or leg* (alternative methods may need to be considered for chelonians less than 10cm in length)

Crocodylians: *left side anterior to the nuchal cluster or left hind leg.*

Snakes: *left side dorsal to vent*

Birds:

Left pectoral muscle or thigh, except:

Ratites: in pipping muscle (in chicks) or in lateral left neck if adults.

Vultures: left base of neck.

Mammals:

Behind the left ear or to the left of the spine between scapula, except for:

Elephants: left tail fold

Hyrax: left lumbar area

Loris: left lumbar area

Carnivores: For some species (e.g., cheetahs in southern Africa and Mexican wolves in North America) microchips have been placed at the left tail base, so that area should be checked.

As in the previous report, we recommend that all other implants (e.g., MGA implants) that include microchips be placed on the right side of an animal in order to avoid confusion with identification implants.

When possible, implants should be placed in a shallow, intramuscular position in order to reduce the chances of migration. To reduce the chances of a "lost" chip through the injection site, consideration should also be given to using medical glue (or suture) to close the implant site.

Due to complications with tracking individuals in databases, transponders should not be re-used and should be destroyed when they are no longer in use for identification of the original recipient.

Standardization of Systems

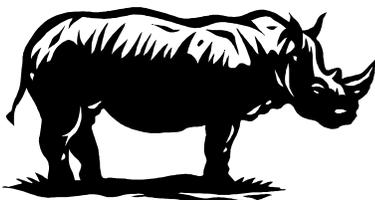
Currently, we recognize that the technology available through the Trovan company is the most widely used and recommended by regional zoological organizations. We recommend that the Trovan system continue to be the global standard (in spite of challenges of product availability in North America due to patent lawsuits by competing companies).

We also recognize that multiple systems are currently in use, that transponder technology is evolving, and that in the future other systems may offer advantages that are unforeseen at the present time. This working group and regulatory agencies should be prepared to evaluate and possibly change the recommendations for implementation of those systems as the systems evolve.

Central Database

We recommend that CITES identify a central database for recording transponder information in regard to appendix-listed species moving in international trade. This database should be accessible by regulatory agencies involved in this trade. For the zoological community, we recommend that transponder numbers, implantation site, microchip manufacturer data, and individual animal identification be recorded with the International Species Information System (ISIS). 🐾

Submitted by Eric Miller, Working Group Convenor.



CITES Working Group Report

At the 11th meeting of the Conference of the Parties in Gigiri, Kenya, the following decision was directed to the CITES secretariat:

"To seek nominations from Parties of Appendix I species that are critically endangered in the wild and/or known to be difficult to breed or keep in captivity for consideration by the Animals Committee for inclusion in Annex 3 of resolution Conf. 8.15 (Rev)".

CBSG has been invited by the CITES secretariat to attend the upcoming Animals Committee meeting in December 2000 and to assist the Animals Committee in resolving issues involving captive breeding and transponders.

The task of this working group was to assist CBSG in producing the requested list of Appendix I species that are Critically Endangered and difficult to breed or keep in captivity. To accomplish this, we will research which species have been bred to or beyond the second generation in captivity. This can be done through review and analysis of:

- a. ISIS historical data
- b. Available studbook data and CAMP publications (and other information available from TAG chairs, Specialist Groups and other resources)
- c. International Yearbook data
- d. Literature search

For all remaining species we will make decisions based on specific species and/or institutional criteria. Species criteria are: diet or habitat specialist; taxonomic uniqueness; reproductive potential; genetically impoverished; disease vulnerability; and life expectancy. Institutional (human resources) criteria include: natural history unknown; financial limitations; technological limitations; not historically kept; and population size/limits.

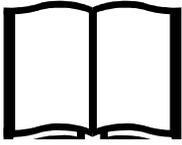
The proposed report will include the status in the wild, status in captivity, and analysis of any breeding or maintenance difficulties.

The next steps are to:

1. Send an urgent request to all regional organizations to review all Critically Endangered species on Appendix I.
2. Production of report by EAZA.
3. Submit report to CBSG for their use at Animals Committee meeting. 🐾

Submitted by Köen Brouwer, Working Group Convenor.

Zoo Conservation Handbook Working Group Report



The debate about the conservation obligations of zoos have been intensifying lately, particularly since the 1999 CBSG and WZO Conferences in South Africa where

the spotlight was firmly fixed on a conservation strategy for zoos and the requirement, in the face of increasing environmental degradation, to intensify zoos' contribution to international conservation. Also, there has been a great deal of debate within WZO and beyond about whether zoos may or may not require guidance about how to undertake conservation.

Moreover, beyond the accepted reasons about why zoos should undertake *in situ* conservation, there is now an additional legal requirement for Member States to comply with conservation obligations in the European region when the EC Zoos Directive is fully implemented in 2002. In fact, the UK has revised its Zoo Standards to ensure compliance with the Zoos Directive and has enshrined new Standards for Conservation, Education and Research that become enforceable in April 2001.

Guidance Handbook

In the context of these debates in the worldwide zoo community, this working group was formed to discuss and propose a framework for the production of a conservation Handbook for Zoos. Participants represented the diverse cultural views of six geographical regions. It is the intention of this working group to undertake the necessary research and produce the first drafts of the principal chapters in time for the 2001 CBSG Conference in Perth.

After much discussion the working group made the following recommendations. The Guidance Handbook should be a tool to assist zoos and aquaria to become effectively involved in conservation and should be accessible to all who are in need of advice and encouragement. It will provide guidance, not be prescriptive, and will include case studies and practical and theoretical models.

The major sections of the Guidance Handbook have been identified by the working group (see below). The next step will involve undertaking a literature search and collation of existing, relevant information, such as national, regional and global guidelines, publications, case histories and other examples. These tasks have been delegated to the working group participants and is being coordinated by Mary Talbot-Rosevear.

During the coming year, information will be disseminated to working group members and other interested parties. The working group then will meet at the next CBSG meeting in 2001 to refine the material.

Publication of the handbook is likely to be a collaborative effort by the regional associations. The handbook will be produced in several formats (electronic, CD-ROM and hard copy) to ensure its widest possible distribution and application. Funds will be sought for translation into the major languages.

Draft Table of Contents

1. Introduction

The Introduction should define conservation; identify the purpose of this book; and identify its audience.

2. Why Should Zoos Do Conservation?

Three reasons were suggested as the basis of zoos undertaking *in situ* conservation.

- Conservation is the accepted, principal role of zoos as stated by the World Zoo Conservation Strategy;
- As custodians of the Earth, we all have a moral obligation to ensure its continued survival in all its complexities; and
- In some regions, zoos have a legal/statutory obligation to undertake conservation.

3. What Zoos Can Contribute to Conservation

The contents of this section will be developed by October 2001. Contributions will be recorded under the following headings: biological, financial, educational, PR, advocacy, research and training.

4. How Zoos Can Benefit From Conservation Involvement

5. How to Do It

This section will include criteria for the selection of projects, project development, management, evaluation, financing and documentation.

6. Bibliography

The handbook will include a bibliography, useful references and hyperlinks.

Comments and contributions can be forwarded to Mary Talbot-Rosevear at: director.fedzoo@zsl.org. A listserv will be established to enable to facilitate communication and collation of material. 🐾

Submitted by Mary Talbot-Rosevear, Working Group Convenor.

IUCN Draft Policy on the Management of *Ex Situ* Populations for Conservation – drafted 31 October 2000

Preamble

IUCN affirms that the goal of conservation is the maintenance of viable populations of all species in the wild. However, conservation managers and decision-makers should adopt a realistic approach to what is possible. The threats to species *in situ* continue to grow. In the future, most biodiversity will live in human modified environments. Threats, which include habitat loss, climate change, unsustainable use, political instability, and invasive and pathogenic organisms, are difficult to control. The reality of the current situation is that we shall be unable to ensure the survival of as many species as possible without increasing the role and use of *ex situ* conservation.

If the decision to bring a species under *ex situ* management is left to the last minute, it is frequently too late to implement, risking permanent loss of the species. However, *ex situ* conservation should never be considered as an alternative to *in situ* conservation, and effective integration between *in situ* and *ex situ* approaches should be sought wherever possible.

The decision to implement a propagation program as part of a formalized recovery plan and the appropriate design of such a program (away from present or historical habitat) will depend on the species' specializations and circumstances. A species-specific propagation plan may involve a range of objectives in reproduction, research, reinforcement, reintroduction, etc., but should be clearly stated and agreed among organizations participating in the program.

The Convention on Biological Diversity, the World Botanical Conservation Strategy and the World Zoo Conservation Strategy clearly define the conditions that *ex situ* propagation facilities and their cooperative networks must satisfy to realize their full potential in conservation.

Vision

Present biodiversity levels will be maintained through all available means including, where appropriate, *ex situ* propagation.

Goal

Those responsible for *ex situ* wildlife populations will use all the resources and means at their disposal to maximize the conservation values of these populations for the world's biodiversity, including restoration, reintroduction and genome resource banking.

Ex situ agencies and institutions should work with range states (with the legal mandate for access and benefit sharing agreements) to collaborate in the precautionary propagation of Vulnerable and Endangered species (according to the IUCN Red List Criteria, 2000). If the species is threatened by natural catastrophes or political and social disruptions, the option of locating the *ex situ* program outside of the species natural range should be considered.

Policy Statements

The basis for responsible *ex situ* population management in support of conservation is founded on benefits for species.

- The primary objectives of *ex situ* propagation are to help sustain a taxon and its natural habitat and associated biodiversity, and provide resources to save other ecosystem components.

– continued –

- While *ex situ* populations may have been established prior to the ratification of the Convention on Biological Diversity, all *ex situ* and *in situ* populations should be managed in an integrated, multi-disciplinary way and developed, where possible, with range state participation.
- *Ex situ* populations must be managed to reduce risk of loss through catastrophe, and should not compete for resources with wild populations and habitats.
- For *ex situ* populations to contribute most effectively to species management in the wild, their propagation should be initiated when husbandry protocols are sufficiently known to ensure a reasonable probability of success, ideally before the species reaches Vulnerable status.
- Although there will be species-specific exceptions due to unique life histories, the decision to initiate *ex situ* programs will be based on one or more of the following Red List Criteria: 1) when there are fewer than 1,000 mature individuals; 2) when the species/population has a very restricted area of occupancy (<20 km²); 3) when the species/population is prone to effects of human activities or stochastic events; or 4) when the species/population is likely to become Critically Endangered or Extinct in a very short time.
- Extreme and desperate situations, where species/populations are in imminent risk of extinction, must be dealt with on an emergency basis. SSC is encouraged to establish a rescue intervention system to facilitate action.
- For those endangered species for which husbandry protocols do not exist, surrogates of closely related taxa can serve important functions (e.g., development of husbandry protocols and staff training). Their collection and propagation should be encouraged.
- Long-range planning for *ex situ* populations must minimize the deleterious effect of *ex situ* management (e.g. artificial selection, pathogen transfer, hybridization) in the interest of successfully establishing wild populations to natural habitats.
- *Ex situ* populations should seek to benefit *in situ* conservation efforts by increasing public awareness and concern through education and professional capacity building programs and by supporting direct action *in situ*.
- Where appropriate, the use of *ex situ* methodologies, population data and genetic resources offer material for research and utilization, the benefits of which should be applied to conservation of *in situ* populations and their ecosystems.

This report was prepared by William Conway, Fred Daman, Susie Ellis, Jo Gipps, John Knowles, Alan Lieberman, Jeremy Mallinson, Jerry Millhon, Oliver Ryder and Dave Wildt. Helpful comments on a first draft were received from Georgina Mace, Mike Maunder and Simon Stuart.

CIRCC Working Group Report

Minutes of the CIRCC Working Group can be found in the proceedings of the World Association of Zoos and Aquariums (WAZA) meeting held in Fall 2000.



ISIS Advisory Committee Working Group Report

This was the first meeting of the ISIS Scientific Advisory Committee. This committee arose from a recommendation of the ISIS Futures meeting held in the Netherlands in February 2000. At this first meeting recommendations were made about how the committee would be constituted and operate. We also began to identify and discuss some of the issues with which ISIS needs guidance.

Initial (Provisional) Membership

Each regional zoo association will identify two people to serve on the Advisory Committee. Appointments from regions to date are: Dave Morgan and Ian Espie (PAAZAB); Andy Odum and Hans Keller (AZA); and Jonathan Wilcken and Kevin Johnson (ARAZPA). In addition, the AAZV has been asked to nominate two committee members, and other disciplinary groups also may be asked to nominate members (e.g., zoo registrars, taxon specialists, aquariums).

Role and Scope

The group discussed the diversity of professionals, domains, skills, and roles needed. The question was raised whether the committee should include some researchers from outside the zoo and aquarium community, because they do at times use ISIS data and because there is interest in increasing the use of ISIS data to further science and other conservation efforts. It was discussed that there could be a contact system to match up any researcher with an appropriate and interested party at a zoo.

The group decided that ISIS needs multiple kinds of advice, covering areas that go beyond just the realm of "scientists". Thus, the Advisory Committee should include experts from science, technology, and the user community. It is perhaps better labeled the Scientific and Technology Advisory Committee. Roles that the Committee should cover include:

- Population management technology advice
- Training & training materials
- Data standards
- Promotion of sound scientific use of the database.
- Driving forward science/management based on data
- Open communication to reduce reinventing wheels
- Investigation of IT systems development, people working with group-living animals, aquariums, etc.
- Inventory available software and database systems

Structure and Operation Procedures

Membership: Regional associations will continue to identify representatives. Nominations from all quarters will be accepted. Areas of expertise that should be represented by two members on the Advisory Committee include: veterinary medicine; epidemiology; taxonomy; population biology/demography; genetics; invertebrate management; aquariums; nutrition; behavior; record-keeping; information technology; GIS; reproductive biology/contraception.

The Advisory Committee, working with ISIS, will forward recommendations for membership to the ISIS Board of Trustees. The Chair of the ISIS Board of Trustees will make appointments to the Advisory Committee for three-year terms. Bob Lacy will serve as interim chair until such time as a more complete Advisory Committee has been constituted and a chair is elected. The Chair will be elected by the Advisory Committee and will serve a two-year term.

Operation: Most business of the Advisory Committee will be conducted via electronic communications. An email listserve will be established for most discussions. Electronic discussions should be open to other interested members of the community when possible.

The Advisory Committee will meet annually at the CBSG meeting. Participation in these meetings will be open to all interested parties.

Issues for possible committee discussion include:

- Ability to meet needs for all taxa
- Standards/analysis/management for diverse taxa
- Taxonomic standards
- Comment and review from user communities
- Training/training materials
- Recommendations for needed software
- Inventory and review of software tools
- Facilitation of communication among developers
- Review of possible future data systems
- Identification of needed data fields
- Recommendations for data systems for groups
- Review of issues related to database access
- Promotion of scientific use of the databases
- Links to genetic resource databases
- Review of needs of diverse disciplines
- Migration of data from old formats and systems

The group noted that there is already work going on in each of the above areas under the ISIS umbrella. The Advisory Committee can provide a broader forum and more diverse expertise to help address these issues. 🐾

Submitted by Robert Lacy, Working Group Convenor.

Tree Kangaroo Update

The Scott's tree kangaroo (*Dendrolagus scottae*), or tenkile as it is known locally, was only discovered in 1989. Following a CBSG Papua New Guinea Tree Kangaroo CAMP workshop in 1998 it was determined that the species is Critically Endangered and faces possible extinction within the next few years. Although its habitat remains relatively unspoiled, local hunting pressure has had dire consequences with possibly fewer than 100 animals remaining.

Fortunately, local villagers are aware of the need to conserve the tenkile and sent an emissary to the CAMP workshop. Following a workshop recommendation, a field team was dispatched in July 1999. This team worked with the community to establish a moratorium on hunting that was endorsed by 13 of the 14 villages in the tenkile range area.

A community representative, along with staff from Rainforest Habitat, PNG, the Zoological Board of Victoria (ZPGB), the PNG National Museum and The Nature Conservancy, wrote an extensive recovery plan for the species in May 2000. This was circulated to experts, local authorities and interested bodies for endorsement. In August 2000 a recovery team was formed and held first meeting in Port Moresby.

There are a number of zoos and NGOs participating in the project. In particular the zoos will provide: reintroduction techniques; small population management; field research experience; veterinary experience; captive husbandry and reproduction; public exposure; funds and fundraising; regional and global networks; and project management.

Key actions from the recovery team meeting were a planning timetable for key events over the next 12



months, funding arrangements and applications for funding, community development options and planning for a research center in the Torricelli Mountains in Lumi. A team of advisors, on which the recovery team could draw upon for expertise, has been invited to participate in the recovery project. This list is extensive and will be enlarged as more experts are identified. A new NGO, called the Tenkile Conservation Alliance, will be established to undertake the project. The alliance emphasizes the role of the community and its needs as a major component of the recovery process. The field station project is underway, with a site identified and in-principle approval given by local authorities. Costs are being compiled and funding is being sought. Through the ZPGB Conservation and Research Department, funding has been secured for a local biologist and two assistants for the next two years.

To support tree kangaroo conservation in general the recovery team is working with the Australian Rice-growers Cooperative. One of the cooperative's biggest markets is Papua New Guinea, where rice is sold under the TruKai brand name. The team is working toward having collector cards inserted into rice packets. The first series of collector cards might be pieces of cardboard (or plastic Pokemon-style cards) with a painting of a tree kangaroo on one side and a distribution map or text in Pidgin on the reverse.

The tenkile conservation effort will be a long-term community development and research project. There are many organizations already lending support; however, this is a new and developing project that will provide many opportunities for organizations as the recovery plan progresses.

For further information on the project or for a copy of the recovery plan, please contact Gary Slater, Zoological Parks and Gardens Board, Australia; email: glsater@zoo.org.au. 🐾

Submitted by Gary Slater, ZPGB.



CAMP Workshop IUCN criteria assessment (*Dendrolagus* spp.):

Tenkile	<i>D. scottae</i>	Critically Endangered
Golden-mantled	<i>D. goodfellowi pulcherrimus</i>	Critically Endangered
Timboyok	<i>D. goodfellowi buergersi</i>	Vulnerable
Goodfellow's	<i>D. goodfellowi goodfellowi</i>	Vulnerable
Seri's	<i>D. dorianus stellarum</i>	Vulnerable
Ifola	<i>D. dorianus notatus</i>	Vulnerable
Matchie's	<i>D. matschie</i>	Vulnerable
Finch's	<i>D. inustus. finchi</i>	Vulnerable
Lowland	<i>D. spadix</i>	Lower Risk
Doria's	<i>D. dorianus. dorianus</i>	Lower Risk

Human Dimensions/ Biocomplexity Project



In its most applied form, population viability analysis has emerged over time as the most effective process by which human-mediated threats to wildlife populations and habitats are identified and prioritized, alternative management options are defined and evaluated in terms of their effectiveness, and strategies for long-term conservation are developed and made operational (Lacy 1993/1994; Lindenmayer *et al.* 2000; Reed *et al.* 2001). As such, PVA is

playing an increasingly central role in the formulation of long-term recovery plans for threatened and endangered species worldwide. However, social scientists concerned with natural resource use have to date had a limited role in these efforts. This limited

involvement comes despite the growing acknowledgment by population biologists and simulation modelers that this additional input is necessary for these models to accurately reflect the impact of humans and human-dominated landscapes on these wildlife populations (Lacy and Miller in press).

This infrequent use of social science data comes about for several reasons. First, risk assessment models are often not designed to incorporate non-animal biological data. The wildlife biologists who develop and use PVA models are generally not sufficiently aware of the social sciences to unilaterally incorporate available knowledge about human systems into projections of their impacts on wildlife. Second, conservation biology has traditionally not been an area of research for social scientists such as human population demographers that are interested in modeling. Where human dimension data have been included, they are often based on broad assumptions or limited empirical data. For example, human demographic models exist to project macro-demographic patterns (McDevitt 1998) but the extension of these projections to include the quantification of a variety of activities by population subsets (e.g., young males ages 15-19) and their effects on specific wildlife populations is considerably more challenging (Ness 1997). Moreover, examples of analyses of the impacts of governmental policies, property rights, economic policies, and human value systems on biodi-



versity, ecosystems, and harvested species have been described (Perrings *et al.* 1995) but linkages to wildlife population processes have not yet been well specified.

In an attempt to address this important issue, a research group led by Philip Nyhus (Colby College), Frances Westley (McGill University), Bob Lacy (Chicago Zoological Society), Phil Miller (CBSG) and Gayl Ness (University of Michigan) has developed a project funded by the US National Science Foundation entitled "Models and Meta-Networks for Interdisciplinary Research in Biodiversity Risk Assessment". This project is an evolution of the original Human Dimensions Network project that has been described in previous issues of the *CBSG Newsletter*. Through this current effort, we argue that scientists from outside of the traditional biological community can – and should – play a larger role in developing new conceptual and simulation tools for biodiversity risk assessment.

Our research group is interested in bringing together a diverse group of specialists in the natural and social sciences in order to promote efforts to enhance risk assessment models that explicitly incorporate quantitative data on human population dynamics and associated processes. Toward that end, we have identified several primary topics that will form the basis of our ongoing discussions and (hopefully) future research efforts: roads/linear developments, disease, wildlife harvesting, human/wildlife conflict, and point pollution of lake systems. Through an intensive study of the detailed mechanisms defining these linkages, we will address the general issues involved in interdisciplinary collaborations, exchange information among those developing models across diverse disciplines, and examine how we might apply these ideas in a more integrated fashion to specific conservation problems.

The proposed "meta-network" is intended to develop a set of collaborations around these specific biocomplexity themes. It is widely recognized that interorganizational collaboration is essential for resolving similar "domain" problems (MacNeill 1991), but our understanding of what processes result in successful collaborations is much less clear (Gray 1989). A deeper understanding of these processes will have significant implications for policy and decision-makers (Westley and Vredenburg 1996) as well as how these networks can more efficiently operate. The workshops and meta-network will provide a forum to integrate modeling tools; integrate expertise; expand the inclusion of individuals, methods and institutions than might otherwise collaborate; and examine and monitor

the implications of this integration for future biocomplexity research.

This is an unparalleled opportunity for a creative synthesis of diverse methodologies because we will draw on more than 100 previous cases and a global network of researchers already linked through these activities. Our first major gathering of these experts is scheduled for late June 2001 at the White Oak Conservation Center near Jacksonville, Florida. An important outcome of these workshops will be an international meta-network of institutions and researchers dedicated to incorporating human impacts into biological simulation models and risk assessment processes. Moreover, we hope to identify longer-term research projects that could serve as proposals for a much larger grant application to the National Science Foundation's Biocomplexity Project. 🐾

References

- Gray, B. 1989. *Collaborating: Finding Common Ground for Multiparty Problems*. San Francisco: Jossey-Bass.
- Lacy, R. 1993/1994. What is population (and habitat) viability analysis? *Primate Conservation* 14/15:27-33.
- Lacy, R. and P. Miller. in press. Managing the human animal: Incorporating human populations and activities into PVA for wildlife conservation. In *Population Viability Analysis*, D. McCullough, S. Beissinger (eds).
- Lindenmayer, D., R. Lacy, and M. Pope. 2000. Testing a simulation model for population viability analysis. *Ecological Applications* 20:580-597.
- MacNeill, J., P. Winsemius, and T. Yakushiji. 1991. *Beyond Interdependence: The Meshing of the World's Economy and the Earth's Ecology*. New York: Oxford Univ. Press.
- McDevitt, T. 1998. *World Population Profile: 1998*. US Bureau of Census. Washington, DC: US Govt Print. Off.
- Ness, G. 1997. *Population and Strategies for National Sustainable Development*. London: Earthscan Publ., Ltd.
- Perrings, C., K. Mäler, C. Folke, C. Hollings, and B. Jansson. 1995. *Biodiversity Loss: Economic and Ecological Issues*. Cambridge: Cambridge Univ. Press.
- Reed, J., L. Mills, P. Miller, K. McKelvey, E. Menges, R. Frye, J. Dunning, S. Beissinger, and M. Anstett. Use and emerging issues in population viability analysis. *Conservation Biology*, in press.
- Westley, F. and H. Vredenburg. 1996. Rethinking sustainability: Criteria for aligning economic practice with environmental protection. *Journal of Management Inquiry* 5 (2):104-119.

Submitted by Phil Miller, CBSG.

Pan African Sanctuary Alliance

In May 2000 CBSG conducted an African Primate Sanctuary workshop in Entebbe, Uganda. The great ape crisis in Africa has caused a rapid growth of sanctuaries, which in turn has created a myriad of management problems. This workshop was the first time that the African sanctuaries ever met as a group, and it had become critical to develop a strategic and tactical action plan for all sanctuaries.

The most important issues for the sanctuaries are carrying capacity, behavioral management, reintroduction, fundraising, conservation education, bushmeat crisis, health management and communications. The workshop accomplished its goals by developing a cogent action plan.

A major issue that was also addressed was the formation of the Pan African Sanctuary Alliance (PASA). Norm Rosen was appointed as temporary chairman of PASA for one year. To date PASA has created a website for communication to the public and for internal use. In addition, two committees were formed to cover fundraising and lobbying, and the chairman has given many presentations on PASA to zoos, universities and the scientific community.

The alliance will meet in one year (in May 2001) in Limbe, Cameroon. At that time, PASA will revisit the 2000 action plan in order to evaluate what must be done in the future. 🐾

Submitted by Norm Rosen, Chair, PASA.



Invertebrate TAGs



Within the conservation breeding community invertebrates have traditionally taken a back seat to the more prominently “advertised” vertebrates. However, over the last few years, with the increasing popularity of butterfly houses, the development of new insectariums, and the realization that zoos and aquariums should be presenting a more complete picture of ecosystems and habitats, invertebrates are beginning to gain prominence. To assist with the development of invertebrate exhibitions and conservation programs and to increase communication within the invertebrate community, regional invertebrate Taxon Advisory Groups (TAGs) have been created.

The American Zoo and Aquarium Association’s Terrestrial Invertebrate TAG (AZA TITAG) was established in 1994 after the original AZA Invertebrate TAG, formed in 1990, agreed to divide into separate aquatic and terrestrial TAGs to more effectively deal with issues concerning invertebrate. The TITAG’s responsibilities cover all terrestrial invertebrates as well as those that have a terrestrial phase as part of their life cycle (e.g., dragonflies, diving beetles). Many of the issues and areas of concern of the AZA TITAG are similar to those facing other regional invertebrate TAGs.

After its inception the AZA TITAG focused primarily on getting the message out to the regional zoo and aquarium community on the potential of exhibiting invertebrates and creating a network of professionals working with invertebrates in zoos, butterfly houses, and related facilities. The TITAG, assisted by AZA’s Government Affairs Department, also worked closely with the U.S. Department of Agriculture to develop containment guidelines for the exhibition and maintenance of butterflies and other insects. The focus of the AZA TITAG was primarily regional, with little discussion or action toward developing cooperative programs with other regional TAGs, with the exception of the international *Partula* snail program. There was also little progress toward identifying and developing conservation initiatives nationally or internationally.

The TITAG was reorganized in 1998, with a redirected emphasis toward conservation and establishing the invertebrate community more strongly within AZA. In addition, the TITAG will continue to pursue its original goal of encouraging more facilities to exhibit invertebrates and assist with their development. To



help with some of these goals the AZA TITAG is drafting its first Regional Collection Plan and Action Plan (RCP/AP).

Within AZA all TAGs must develop an approved Regional Collection Plan and Action Plan. This not only assists the TAG in setting goals and directions but also allows individual institutions to apply for grants



for identified taxa and programs from the AZA’s Conservation Endowment Fund. An RCP/AP also helps to encourage participation by other facilities by identifying programs and species with which they can work. It finally aids the AZA in promoting the cause of individual TAGs and supports them and their programs.

Because of the number of taxa with which it can potentially work, the TITAG is developing a different style of RCP/AP, which may also be applicable for other regional TITAGs. The first section of the plan identifies species and conservation programs that are already in place or in development. It also identifies taxa and their habitats that require assistance based on the IUCN’s Red Data List, U.S. Department of Interior’s Endangered Species List, IUCN Specialist Groups, or other regional conservation organizations or agencies. Other sections of the RCP/AP include: taxa requiring research initiatives (e.g., systematics, population genetics, surveys); taxa requiring additional husbandry and life history studies; commonly available taxa that are easy, moderately difficult, and difficult to breed or maintain in captivity; and habitats that are hotspots for invertebrate diversity requiring conservation initiatives. Unlike many vertebrate RCPs, not every taxon will be identified in the RCP/AP, as this would be both unfeasible and ineffective.

Through the RCP/AP and the initiative of individual institutions, the AZA TITAG is identifying conservation programs, some with the possibility of breeding programs. It has been challenging to identify which *in situ* or *ex situ* programs with which to get involved, and how and in what capacity. There are a number of programs within the North American conservation breeding community that are already underway [e.g., *Partula* snail (*Partula* spp.), Karner blue butterfly (*Lycaeides melissa amuelis*), American burying beetle (*Nicrophorus americanus*), Schaus’ swallowtail (*Papilio aristodemus ponceanus*)]. The beauty of many invertebrate species, because of their often small size and limited distribution, is that they lend themselves well to conservation

initiatives by one or only a few institutions. This has both advantages and disadvantages. One advantage is that it can allow an individual institution to make an immediate impact on the conservation of a species and its habitat. An institution may even be able to establish a conservation program for a species found on their property. The disadvantage is that the program may be so regional that other institutions may be unaware of it and not see the potential of this type of program. It is extremely important that information on these program types be disseminated within the region and preferably across regional boundaries.

Other areas of focus for the AZA TITAG also faced by other regions include record-keeping and data management. In ARKS 4 from ISIS and within REGASP invertebrates are included within the taxonomic database. However, within ARKS 4 there are still data issues that need to be addressed that are peculiar to invertebrates (e.g., variety of life history stages, complete versus incomplete metamorphosis, lack of individual identification, hermaphroditic individuals). The TITAG is also constantly promoting the development of new invertebrate exhibits. This could give the invertebrate community a greater presence within AZA. It would also aid in developing a network of

facilities and individuals working on invertebrate exhibition and conservation. However, a problem with many invertebrate facilities is that they are outside of a regional zoo association, e.g. butterfly houses. Invertebrate TAGs need to work with regional zoo authorities to determine how they and the TAG can best support each other.

The AZA TITAG, like all regional invertebrate TAGs, is working toward the common goal of habitat and species conservation. This may be through exhibition, education, research, conservation breeding programs, or a myriad of other methods. Because there are so many common issues and related practical considerations across all regional invertebrate TAGs there is much to be gained by increasing our effectiveness at linking up with each other to better realize shared conservation objectives. It is up to the invertebrate TAGs to demonstrate their importance within the conservation breeding community and enlighten both our visitors and our colleagues about the “little things that run the planet.”

Submitted by Paul Pearce-Kelly and Ed Spevak.

Scenes from the 2000 CBSG Annual Meeting . . .



Global Wildlife Nutrition Database



The need for a globally-accessible database of food composition, as a prelude to evaluation of animal diets, habitat, and nutritional health, was outlined during the previous CBSG meeting in Pretoria (October 1999). A working group was formed during that meeting to address this concept in more detail, and agreed on the following:

“Information on the nutrient composition of numerous feedstuffs utilized in managed feeding programs, if available at all, is scattered throughout the literature, yet provides the foundation for evaluating dietary husbandry of numerous species held in captivity. Linked databases of: 1) detailed information on the nutrient composition of various feedstuffs; and 2) physiological assessment parameters for evaluating nutritional status, contributed to and accessible globally, would begin to fill this knowledge gap, and allow us to better understand and meet the nutritional needs of species under our care.

Goals of the Wildlife Nutrition Database are similar to those of any large database structuring project:

- 1) to gather information from diverse sources, not all of which are local (nor published in open literature);
- 2) to deliver information to a wide range of users; and
- 3) to maintain the information over time in the face of changing technology.

The short-term goal is to provide an on-line, easily accessible global database of nutritional information on composition of feedstuffs utilized by wildlife, with an ultimate application as a tool to facilitate assessment of the health of animal populations and their nutritional environment. “



A number of objectives and actions were suggested whereby these goals might be achieved.

Implementation of Objectives/Activities

Based on working group input and comment from the 1999 CBSG meeting, a pilot module was created using the black rhinoceros (*Diceros bicornis*) as a target (SSP/EEP priority) species. All identifiable data on nutrient composition of native plants consumed by black rhinos were entered into an Excel spreadsheet. Related natural history, health and management data types were collated using WILDPro and Zootrition templates, and an integrated demonstration model was constructed. This preliminary data set was made available for feedback and comment through presentation at the CBSG 2000 meeting, as well as through publication on the subscription section of the WILDPro Website (www.wildlifeinformation.org).

To further develop the Wildlife Nutrition Database concept, a small planning grant was awarded through Columbia University's Center for Environmental Research and Conservation to address applications in Latin America. A meeting was hosted at the Wildlife Conservation Society in February 2001 that identified end users, content and information providers, and potential funding sources. Attendees of this initial meeting included local collaborators from the New York Botanical Garden, Wildlife Trust, and the Wildlife Conservation Society, together with representatives from WILDPro and the Zoo Conservation Outreach Group (an organization which focuses on Latin American zoos). A Latin American pilot model utilizing howler monkey data is planned, and will be jointly pursued.

Such working models are essential tools to enable end users and possible collaborators to visualize the applications for assessing captive diets, reintroduction requirements, habitat assessment, and other integrative data sets vital for wildlife conservation. Through the process of establishing prototype datasets, issues associated with mechanisms and criteria for data inputs, review, outputs, ownership, and linkages to relevant organizations/existing databases are being addressed. In addition, the working models provide a foundation and structure to be used as the basis of future funding applications. 🐾

Submitted by Suzanne Boardman, Wildlife Information Network, and Ellen Dierenfeld, Wildlife Conservation Society.

Catalyzing Capacity Building in Technology Transfer

CBSG has a unique opportunity that has only been partially exploited – that is using its extensive network to build scientific capacity in areas of need. Its network includes experts with specialties in wide-ranging skills from biomedical science to landscape assessment. However, this network of experts is most often used for single workshop assessments, usually Conservation and Assessment Management Plans and Population and Habitat Viability Assessments. Although this on-off participation is useful for addressing immediate workshop concerns, these experts could be even more valuable if they were willing to help build capacity in range countries (i.e., empowering stakeholders in skills that have direct application to preserving biodiversity).

The biodiversity community is realizing that long-term conservation success will not be based on single species workshops convening only once. Rather, perhaps one of CBSG’s most important legacies could be the catalysis of training in-country people (who ultimately are the ones responsible for preserving their own biodiversity and natural resources).

There already is evidence that CBSG could be successful in this respect. To date, the CBSG secretariat has had some positive experiences with capacity building by conducting several facilitator training courses as well as biomedical training of colleagues in Asia working with tigers and giant pandas. Additionally, the CBSG regional offices have begun to have community impacts through local training in various wildlife disciplines.

As we evaluated trends both globally and within local CBSG activities, there was consensus at the Futures Workshop that CBSG could be more influential and effective at facilitating technology transfer. Most importantly, this major contribution could theoretically occur without a major cost (personnel or financial) to the organization itself. This can occur largely because of the network, especially the zoo network, that already employs many potential trainers. Because zoos realize the value of contributing to capacity building, they are likely to both contribute their employees as well as financial support to fund training.

Therefore, this working group first brainstormed ideas about the potential role of CBSG in conservation training. This then was followed by the creation of a model that flowed from the CBSG Secretariat to the CBSG Regional Offices that, in turn, would identify a network of available and willing trainers that could represent and teach disciplines not currently being taught by other organizations. All of this will be accomplished by:

1. Creating a CBSG staff point person for training;
2. Creating databases that will facilitate linking the required expertise with needs:
 - a. Training database on extant/needed courses;
 - b. Database of experts;
 - c. Database of international conservation projects.
3. Convening a Conservation Training Summit that will:
 - a. Provide new information.
 - b. Identify new additions to the network.
- c. Develop a long-term strategic plan.
- d. Identify new methods for disseminating information, training and education.
- e. Work toward a strategic plan for new partnership development that would facilitate technology transfer.

People and timelines were assigned to each task. 🐾

Submitted by Susie Ellis, CBSG, and David Wildt, Conservation & Research Center, National Zoo.



Joint Venture Partnerships

One of the outcomes of the CBSG Futures Search we recently held at White Oak Conservation Center was the development of the concept of Joint Venture Partnerships as a means for realizing our goal of incorporation of the human dimension in CBSG workshops.

It is obvious that the impacts and concerns of the people living with and near the species being evaluated are critical to the status of that species.

We recognized long ago the need to develop a method to incorporate these people and this information into our risk assessment process. All major initiatives and programs take several years to develop from concept to practical reality, and this is no exception.

Our first Futures Search was conducted in 1993. The highest priority recommendation from that workshop was to hire an additional program officer to free Ulie up to develop and test the addition of a human demography dimension to the PHVA process. Progress then began to determine just what was needed in order to incorporate human demographic data and local stakeholders into the CBSG workshop process. In 1994 John Williams, a human demographer with IUCN, came on board on a contract basis. He participated in PHVA workshops for gibbons in Thailand and Indonesia. John prepared detailed local projections of the population in areas surrounding the target species and organized a working group at both workshops to focus on the human impacts on the local habitat. Recommendations from the workshop reflected this focus. However, there was no representation from local communities at the workshops, so detailed information on the utilization patterns of local communities and the needs of the local people were not available.

In 1995 a PHVA was held for the Indian rhino. At this workshop, a local NGO was contracted to undertake community research prior to the workshop and then to bring this information to the PHVA. However, as with the gibbon workshops, there was no mechanism for either the involvement of local stakeholders or follow-up activities.

These experiences helped us to focus in on what we really meant by "the human dimension". At the second CBSG Futures Search held in 1996, the incorporation of human demography into the workshop process was again recognized as a high priority, and more specific

recommendations were made. These recommendations included the recognition of a need to: develop a network of partners; explicitly build the human element into the PHVA process; include indigenous people in the workshop; and build a human demography module into the Vortex risk assessment process.

A major boost to this initiative was a three-year grant awarded to our colleague Dr. Frances Westley by the Social Science and Humanities Council of Canada.

This grant allowed us to establish an interdisciplinary Human Dimensions Network to focus on implementation of recommendations of the 1996 Futures search.

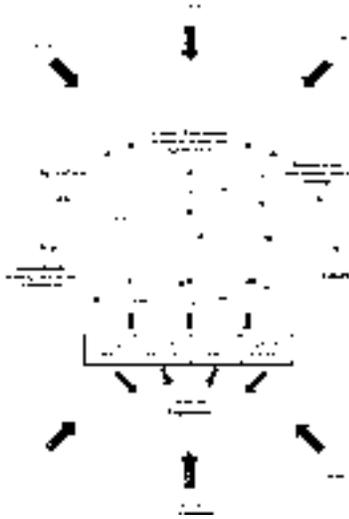
Early on, the majority of the network's time was spent on the question of how to get the right people and information to the PHVA. An important tool developed by the network is our now famous 'bubble diagram'. It was constructed to help identify and incorporate the necessary people and information into the process. The idea was to better define the connections between human, household, industry, government and wildlife populations.

At this stage we still felt it was CBSG's responsibility to get the right people from these various domains to the table but this proved extremely difficult.

The network conducted a number of expanded process experiments, the first being at the mountain gorilla PHVA in Uganda. We had plenty of biological information about the species and we had human demographic data for Uganda. However, for a variety of reasons, we were unsuccessful at getting local information and local stakeholders into the process. The network experiment at the tree kangaroo workshop in Papua New Guinea was far more successful. We had local landowners participating, but their presence was coincidental rather than as a result of our efforts. The workshop organizer in PNG had a long-term relationship with several NGOs working there, and it was through them that the local people and the localized information were brought to the workshop.

This experience made it clear to us that it cannot be CBSG's responsibility alone to get the right people and information to the table. We cannot expect to be able to identify local participants, particularly in a country in which we have not worked before. We need to link with a partner who can.

So, at the recent 2000 Futures Search, we focused more specifically on the development of partnerships



with organizations working on the ground. Eight participants from four countries reviewed the learnings from the experience of the past seven years and envisioned a future in which CBSG workshops are operated as joint ventures with partners who have specific local knowledge and a commitment to implementation of recommendations.

CBSG is not an implementation organization. However, since local participation and implementation are both critical to the success of what we do, the working group recognized the importance of partnering with an entity that can assist in these areas. We currently consider ourselves partners with the organizers of CBSG workshops, but we are now seeking to redefine the relationship with certain organizations that operate locally in order to more strongly integrate the human dimension into wildlife conservation.

The joint venture partnership is to be long-term. It is not a relationship that begins with the scheduling of a workshop, and it does not end with the publishing of a report. The joint venture partner will bring to the relationship its own needs that will be equal to those of CBSG. The partner may be a foundation, NGO or another conservation organization. Initially identified characteristics of a joint venture partner are:

- 1) experience working with the local community;
- 2) a strong interest in both the welfare of the local people and the integrity of the environment;
- 3) agreement to work with CBSG processes; and
- 4) the capacity and motivation to follow up on recommended actions.

We have one such partner now, Fundacion NanPaz, in Ecuador. Fundacion NanPaz is a non-profit foundation of Albert Oil Company. CBSG brings to the partnership an international network of experts, scientific credibility, and process and facilitation skills. Fundacion NanPaz brings financial support, localized social scientific information, local, indigenous and industrial stakeholders, and a commitment to implementation.

Harrie Vredenburg has been nurturing this relationship for a few years. His interest was in bringing resource-extracting industrial stakeholders into the CBSG workshop process. Harrie introduced us to Jim Geenen, Executive Director of the foundation, almost two years ago, and a joint venture partnership was formed.

Harrie's relationship with Jim led to our first test of the partnership in a CBSG workshop. A CAMP was held in Ibarra, Ecuador just a few weeks ago for

selected species in the Cuyabeno Reserve (see the following report). From our perspective, the Ecuador CAMP and the partnership with Fundacion NanPaz serves as our model for Joint Venture Partnerships. Its success leads us to be very optimistic about the value to CBSG of this type of arrangement.

Fundacion NanPaz funded the workshop, they had the contacts and trust built up with the local community to get the right people with the right information to the workshop, and they made a formal proposal at the close of the meeting to act as organizer of a group of stakeholders in development of a proposal for funding to implement all workshop recommendations.

Our next step is to build on this success by implementing the actions identified at the Futures Search. Those include:

- Evaluating and documenting in a case study the lessons of the Cuyabeno CAMP experience.
- Exploring other Joint Venture Partnership opportunities (this will include other projects with Fundacion Nan Paz and identification of other potential partners).
- Preparation of a protocol and process manual for identifying partners and establishing relationships.
- Revision of the joint venture process to incorporate the quantitative tools



- developed by the biocomplexity group.
- Ongoing management of partnership relationships.

With the relationship with Fundacion Nan Paz as a Joint Venture Partnership model, CBSG is now in an excellent position to move this human dimension initiative forward. 🐾

Submitted by Onnie Byers, CBSG.

Cuyebano CAMP



The Cuyabeno CAMP held on 27-30 September in Ibarra, Ecuador was the first to emphasize selected species of the Cuyabeno Biological Reserve located in the North East Ecuadorian Amazon. The workshop was organized by Fundación NanPaz (FÑP) with the collaboration of various scientists, conservationists, NGO's, government representatives and indigenous organizations.

FNP is a community development NGO that operates a technology transfer, agriculture research and training center near the reserve. With the help of CBSG and various indigenous representatives, FNP hopes to expand its assistance to include species and habitat conservation.

The Cuyabeno covers a total of 1.6 million acres and Ecuador's second largest protected area. The level of biodiversity present there includes: 200 mammal species; 600-800 bird species; 250 reptile and amphibian species; and 500 fish species.

The 53 workshop participants focused on the sustainable and effective management/protection of selected threatened species of the Reserve. Those species included:

- Amazon Pink Dolphin (*Inia geoffrensis*)
- Amazon Manatee (*Tricheshus inunguis*)
- Giant River Otter (*Pteronura brasiliensis*)
- Woolly Monkey (*Lagothrix lagothricha*)
- Anaconda (*Eunectes marinus*)
- White-Lipped Peccary (*Tayassu pecasi*)
- Paiche Fish (*Arapaima gigus*)
- Harpy Eagle (*Harpia harpyja*)
- Salvini's Currassow (*Mitu salvini*)
- Scarlett Macaw (*Ara macao*)
- Piping Guan (*Pipile pipile*)
- Speckled Caiman (*Melanosuchus crocodilus*)
- Black Caiman (*Melanosuchus niger*)

Participants were first grouped according to their field of expertise and/or interests into the following divisions: Mammals, Birds, Reptiles and Plants. These groups then collected data on each of the relevant species and entered this data into taxon data sheets.

After completing taxon data sheets for these species, the participants formed three groups to address problems, needs and solutions pertaining to the Cuyabeno Reserve itself. Some of the problems and solutions identified follow.

Legislation, Law Reformation & Tourism

Problem: Laws of environmental responsibility are not clear or applied consistently.

Solution: Formation of a committee to oversee transmission of present and new laws.

Problem: Tourism and oil activities are conducted without regard for the environment.

Solution: Greater emphasis on enforcement of International norms of certification in oil and tourism industries.

Problem: Highway openings have brought colonization and land occupation.

Solution: Production of land occupation census.

Solution: Reserve demarcation.

Organization, Communication and Education

Problem: Little infrastructure for external communication or internal mobilization.

Solution: Development of radio and email systems within Cuyabeno communities.

Problem: Inefficiency of National System of Protected Lands. Annually 10-15,000 tourists pay \$US 20 each to enter the reserve, but the reserve receives only \$US 8,000 per year for upkeep.

Solution: Delegation of a commission of Cuyabeno communities to introduce TV campaign to increase public pressure for greater Cuyabeno budget.

Management of Reserve Natural Resources

Problem: There exists no clear national policy of conservation for the reserve.

Solution: Application of local, national and international pressure for the creation of clear management and conservation policies.

Solution: Campaign to increase international and national resources designated to the reserve.

FÑP is proud to announce that as a result of, and in direct relation to, the success of the Cuyabeno CAMP, 15 representatives from the CAMP are now involved in a new FÑP initiative – the Cuyabeno Alliance. The Alliance is actively coordinating an international sustainable management policy for the reserve in order to properly address the region's present and future security. 🐾

Submitted by Jim Geenen, Fundacion NanPaz.

CBSG Staff Change

All things change with time, including the staff at CBSG. It is with great regret that we announce that Dr. Susie Ellis, Senior Program Officer, will be leaving CBSG at the end of July 2001. Susie will be taking a new position with Conservation International (CI) as their Senior Representative for Indonesia. She will assist with strategic planning, policy, project planning and implementation, and fund-raising. Her work will contribute to on-the-ground conservation initiatives in Indonesia, a challenging task given the recent environmental and political changes in that country.



This move provides an opportunity to further strengthen the relationship between CBSG and CI, which have been partners in many conservation initiatives around the world. Because of the common missions of both organizations, Susie will complete several CBSG commitments through the end of 2001 before leaving.

We are grateful for all of Susie's hard work and contributions to CBSG over the past 10 years and will miss her enormously. We wish her the best of luck in her future career with Conservation International in Washington, DC and hope to continue to work with her in the years ahead.

IUCN Red List Online

The new IUCN Red List is available online (www.redlist.org) and includes links to a wide variety of threatened plant and animal species. The site includes taxonomic information, conservation status and distribution information for listed taxa. A search engine allows visitors to locate specific information within the database. Justification for the addition or removal of species to the list is also provided.

Course Offered

The Royal Veterinary College and the Institute of Zoology are offering a 12-month MSc course in wild animal health beginning in October 2001. Topics include husbandry, nutrition, taxonomy, population biology, conservation genetics, wildlife utilization, welfare and ethical issues as well as a broad range of veterinary topics. For more information and an application form, contact Dr. M.T. Fox, Royal Veterinary College, Royal College Street, London NW1 0TU (tel: 020 7468 5000; fax: 020 7388 2342; email: mfox@rvc.ac.uk).

Telephone Numbers for CBSG and ISIS

Please note these new numbers for the CBSG Office and ISIS Office in Minnesota:



CBSG Office telephone:	01-952-997-9800
ISIS Office telephone:	01-952-997-9500
CBSG/ISIS fax:	01-952-432-2757

CBSG *News*



*Newsletter of the Conservation Breeding Specialist Group
Species Survival Commission
IUCN – World Conservation Union*



May We Discuss Another Issue?

CBSG News is currently distributed to a network of more than 800 CBSG members and conservation professionals in 170 countries. In order to keep up with increasing expenses for the printing and distribution of *CBSG News*, we are asking for contributions from readers in hard currency countries who feel they can afford to help us defray these costs. If you would like to assist CBSG with these expenses, please take a moment to fill out the coupon below. Suggested contribution is US \$35. Thank you for your support.



Name _____
Institution _____
Address _____

Country _____

- Yes! I am enclosing _____ payable to CBSG to help defray costs for publication and distribution of *CBSG News*.
- I cannot contribute at this time, but would like to continue receiving *CBSG News*.
- I no longer wish to receive *CBSG News*.

Please return to : CBSG, 12101 Johnny Cake Ridge Rd., Apple Valley, MN 55124 USA