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2001 CBSG Annual Meeting Memories

It’s a new year and the 2001 CBSG Annual Meeting is several months behind us now but the energy and contribution of the participants, the pleasant and helpful attitude of the docents, the hospitality of the hosts and the beauty of the venue remain clear in our minds.

The CBSG Annual Meeting, which was held on Rottnest Island in October 2001 and hosted by Perth Zoo, was attended by 78 delegates representing 55 different institutions in 20 countries. Brian Easton, CEO of Perth Zoo, and his staff, particularly Merri Blakemore and the docents, did a superb job preparing for this intensive 2 ½ day conference and were incredibly cheerful, knowledgeable and accommodating throughout. We are extremely grateful for the time and energy they and many others dedicated to ensuring a productive and enjoyable CBSG conference.

The majority of the Meeting was spent with participants in one (or more) of six working groups: 1) Australian Mammals; 2) ISIS Scientific Advisory Group and the Global Animal Database Group (GADG); 3) the Bushmeat Crisis; 4) Redesign of CBSG Annual Meeting; 5) WAZA In Situ Priorities Synthesis Group; and 6) Global Invertebrate Conservation. Each group presented preliminary and final reports to the plenary session and their work and recommendations are summarized in this issue of CBSG News. In addition, presentations were given on each of the CBSG networks represented at the Meeting (South Asia, Mesoamerica, South Africa, Indonesia and Japan) and several excellent and diverse topic/project-focused presentations were made. These included a presentation by Karl Amman on the Bushmeat Crisis; Barita Manullang, Diane Gates and Leif Cocks gave a joint presentation on the Javan Gibbon Rehabilitation for Conservation Project; and Terry Fletcher and Colin Hyde reviewed the Perth Zoo’s role in species recovery in Western Australia. Paul Pearce-Kelly of London Zoo updated us on the progress being made in the International Partulid Programme and John Cooper, University of Cape Town, shared past and future efforts to conserve southern African breeding seabirds. This issue of our newsletter also contains reports of these presentations.

A highlight of the meeting was a fantastic sunset tour of Rottnest Island, hosted by the Rottnest Island Authority and the Perth Zoo. This was an energizing event that brought the entire group together. Ulie closed the conference with well deserved thanks to all the participants for the enormous amount of energy they put into the meeting and for the reports produced.

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He also pointed out the increased complexity of the topics the zoo community and CBSG are facing and the long way we have come in developing tools and techniques for addressing them. It was hard to leave Rottnest Island, literally, at the close of this wonderful and motivating conference. The swells were significant and the ferry ride back to Perth was hair raising but every minute was enjoyable thanks to the friendly, relaxed group we had the pleasure of working with.

The 2002 CBSG schedule is filling up rapidly. Especially exciting will be the launch of a new and improved CBSG web site, VORTEX for Windows, a CAMP for all South African Mammals, a series conservation planning workshops for National Wildlife Refuges in the United States and the 2002 CBSG Annual Meeting hosted by Schoenbrunn Zoo, Vienna. If you would like additional information on any of the projects on the CBSG schedule, please let us know. We look forward to working with many of you throughout the year.

Dr. Onnie Byers  
CBSG Program Officer

Dr. Ulie Seal  
CBSG Chairman

Note to CBSG Members

Thanks to those of you who returned your SSC and CBSG membership forms, it has been helpful to update our contact information records! If you have not yet returned your forms, but wish to remain on the CBSG and SSC membership lists and receive CBSG News and Species, please send your membership form in at once. If you have misplaced your membership form please contact the CBSG office and we will send you a new one.

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**CBSG Mission Statement**

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

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

Membership
The Australasian Regional Association of Zoological Parks and Aquaria currently represents 45 zoological institutions and 11 associated institutions. ARAZPA membership also includes 162 individual members working in, or associated with, the zoo and aquarium community.

At the Annual General Meeting of the Association this year, the membership approved some changes to ARAZPA’s structure. The main effect of these changes is an expansion of ARAZPA’s individual member program. Individual members of the Association will now elect and be represented by, two ARAZPA Board members. These members will drive a number of specialist groups within the region, each focusing on a core area of zoo expertise or interest. Current groups, which include some that have been operating productively in the region for many years, cover: animal husbandry, animal records keeping, education, marketing, zoo research, taxonomy, veterinary science, horticulture and South-East Asian conservation action. ARAZPA facilitated a workshop in September, to identify ways of using these groups more effectively to encourage professional development and networking opportunities for those involved and to improve ARAZPA’s cross-disciplinary delivery of conservation.

Policy Development
ARAZPA updated its Code of Practice, Constitution, and Animal Transaction Guidelines. In response to the expansion of ARAZPA’s policies and codes in recent years, the Association has produced the ARAZPA Policy Handbook. The Handbook contains in one place, all of the membership-endorsed documents guiding the operation of the Association, plus a record of all changes made to these documents over time.

ARAZPA Branches
The ARAZPA Board approved in principle, the establishment of a New Zealand branch office for the Association. This would enable ARAZPA to improve services to existing New Zealand members and to expand membership in that area of the region. Perhaps most importantly, the new position would coordinate and facilitate assistance to the captive components of wildlife agency species recovery initiatives in New Zealand. The position is expected to be in place next year.

Australasian Species Management Program (ASMP)
An ASMP workshop for organisational heads of ARAZPA institutions was held at Adelaide Zoo in August. The purpose of the workshop was to provide information and facilitate discussion, on a number of important issues currently affecting ASMP processes. Issues discussed included: government interpretation of new CITES I provisions, implications for zoos of recent changes to ASMP regional collection planning processes, and current initiatives to develop the next generation of zoo animal records software. Points raised in these discussions will be used to inform future policy decisions.

Environment Australia, which operates as the CITES management authority for Australia, has agreed to recognise species management programs organised by the ASMP, as “Cooperative Conservation Programs” under the new CITES regulations. This is a welcome endorsement of the ASMP’s underlying principles of sustainability and conservation.
New Regional Planning Documents
The ASMP produced the first of its new regional collection planning documents – *The Exotic Mammal TAG Action Plan*. This document, which covers all exotic mammal taxa held in, or planned for, the Australasian region, includes: the principles underlying TAG decision-making processes, the rationale behind each recommendation, target population sizes, agreed management units, a list of “actions” for the TAG for the coming year and a list of recommended changes to institutional REGASP data.

New Species Action Plan Folders
The first of the new *Species Action Plan* folders was distributed to ARAZPA members. These folders, one for each TAG, compile in a loose-leaf, easily updated format, all current management strategies for ASMP species managed under that TAG.

Collaboration with ISIS
ARAZPA has once again been operating as an International Species Information System (ISIS) branch, providing localised services to Australasian ISIS members. Discussions with ISIS to formalise the role and duties of an ISIS branch office are ongoing.

Representatives from Australasia, North America and Europe gathered to discuss the future of collection planning software. Development of REGASP has continued, incorporating some of the ideas from this workshop. REGASP-LINK, the program which allows the incorporation of regional priorities, recommendations and classifications into REGASP, was customised for use in Europe.

Training
Training undertaken by ARAZPA staff in the past year included:
- Teaching Captive Population Management for Charles Sturt University. The subject is taught annually as a 16-week distance learning course that includes a three-day residential school.
- Teaching the use of ISIS software to staff of ARAZPA institutions. A four-day course was run in Queensland, and included staff from four ARAZPA institutions.
- One-on-one training at the ARAZPA office was provided to a number of staff from ARAZPA institutions. Programs taught included ARKS, SPARKS and REGASP.

Education
ARAZPA’s Education Specialist Advisory Group continued its ASX Frog Focus initiative – an Australia-wide schools education program monitoring threatened frog populations. The Group also once again judged the Readers Digest Awards for environmental schools programs. A regional education policy was drafted for submission to the ARAZPA Board.

Publications
ARAZPA publications produced during the 2000-2001 period include:
- 2001 Regional Census and Plan for ARAZPA Zoos and Aquaria.
- ARAZPA Policy Handbook.

ARAZPA also publishes quarterly editions of the ARAZPA Newsletter, reporting news of regional developments and zoo and aquarium activities.

In addition, a total of 78 studbooks were submitted to ISIS for publication on the *ISIS/WZO Studbook Library CD ROM*.

Submitted by Caroline Lees
The American Zoo and Aquarium Association (AZA) represents 201 zoological institutions and nearly 6,000 zoo and aquarium professionals. The following are some of the activities completed during 2000-2001.

**Conservation and Science**

**Conservation Program Oversight**
AZA currently administers 381 studbooks, 178 Population Management Plans (PMPs) covering 229 species, 102 Species Survival Plans (SSPs) covering 145 species, 45 Taxon Advisory Groups (TAGs), 10 Conservation Action Partnerships (CAPs) and 11 Scientific Advisory Groups (SAGs).

**Population Management/SSPs**
- **Population Management Center:** In 1999, the AZA board approved expenditures of $100,000 from the CEF to help create an AZA Population Management Center as a 2-year pilot project. In January 2000, the PMC was authorized to begin at 2 AZA institutions in Chicago: the Chicago Zoological Society (Brookfield Zoo) and the Lincoln Park Zoo.
- **Group Population Management:** The second Group Population Management Workshop was held in Seattle in October 2001.
- **New Species Survival Plans:** Six taxa were added to AZA’s list of SSPs this year.

**Data Management**
- **Animal Data Information Systems Committee**
  The AZA board charged AZA’s Animal Data Information Systems Committee to continue to examine the potential for developing a new global animal database. The action steps include collaborating with ISIS on a new data clean-up initiative, developing data standards, and developing a financial plan.

**Strategic Collection Planning/TAGs**
- **Institutional Collection Planning Workshop:** was held in Colorado Springs, CO, March 2001.
- **Marsupial and Monotreme ‘Species Summit’**, along with ARAZPA, was successful in its endeavors to evaluate the feasibility of the AZA M&M Regional Collection Plan.
- **New Taxon Advisory Groups:** Elephant, and Pangolin, Aardvark and Xenarthra.

**Field Conservation/Conservation Action Partnerships**
- **Field Conservation Resource Guide:** was edited, formatted, updated, and published. Proceeds from the sale of the book will support the conservation and science work of AZA.
- **AZA in Action, available on the AZA website:** the catalog provides a listing of high-quality conservation and related scientific and educational opportunities in need of support.
- **Unified Field Conservation Initiative:** AZA has drafted a white paper that outlines the potential for a unified AZA Field Conservation Initiative.
- **Field Conservation Committee Long-range Plan:** was used to inform development of the AZA Long-Range Plan. A number of exciting efforts are underway.

**Partnerships**
- **Bushmeat Crisis Task Force (BCTF):** The consortium now consists of 29 supporting and contributing organizations that provide financial and other support for efforts to stop the illegal, commercial bushmeat trade in Africa.

**Conservation Planning**
- **BCTF Collaborative Action Plan:** This highly successful meeting, held at Conservation International in Washington DC, resulted in the identification of many areas on which BCTF and its partners will be focusing their attention in the next three years.
- **Butterfly Conservation Initiative:** The overall goal of this fledgling Initiative is to stabilize the 21 federally listed species of Lepidoptera in the U.S.
AZA Long-range Plan, KRA III: A senior staff and Board members met in May 2001 to discuss and update AZA’s Long Range Plan. The AZA Board approved the Plan in August and work will now commence identifying specific action items.

Animal Welfare
- Animal Care Standards for AZA institutions: The AZA animal Welfare Committee developed a format for the production of animal care standards. It is in the process of modifying AZA’s Minimum Husbandry Guidelines for Mammals into this format.
- Elephant Management and Care Standards for AZA institutions: The AZA Standards for Elephant Management and Care were published and sent to all AZA institutions.
- Animal Welfare Committee Long-range Plan: The Animal Welfare Committee’s charge is to incorporate animal welfare considerations into all aspects of AZA’s cooperative programs. The Committee formulated a long-range plan, which was incorporated into the AZA Long-range Plan.
- Training and Enrichment Course at AZA Schools: for Zoo and Aquarium Professionals.

Science and Scientific Advisory Groups (SAGs)
- Science and Technology Special Committee: continues to work on its report addressing the current state of science in AZA institutions.
- Reproduction SAG: The AZA Genome Banking Advisory Group has evolved into a Reproduction Advisory Group.

Fund-raising for Conservation
- Conservation Endowment Fund (CEF): In 2001, the AZA CEF received a total of 41 proposals, representing $841,670 in requests. The CEF Scientific Advisory Board recommended that $310,215 be awarded to support 17 projects.
- West Nile Virus: in conjunction with the American Bird Conservancy, AZA raised $25,000 to support the development of an avian vaccine for the West Nile Virus.

Publications
- Great Apes and Humans: The Ethics of Coexistence.
- Grzimek’s Animal Life Encyclopedia.

Government Affairs
- Legislative Conference: Was held to address government affairs issues relevant to AZA members and to raise congressional awareness of their efforts.
- Capitol Hill Event: AZA organized an evening reception featuring members’ work in field conservation on Capitol Hill. Speaker of the House Dennis Hastert hosted the event, which featured Jack Hanna, Newt Gingrich and Congressman Wayne Gilchrest.
- Multinational Species Conservation Fund: AZA was part of a broad coalition of conservation NGOs seeking an increased funding for the Multi-National Species Conservation Fund (MNSCF) account for FY 2002.
- Foot and Mouth Disease: on 3 May, 2001, USDA held a meeting with invited guests from AZA and AAZV to discuss the agency’s foot-and-mouth Disease Emergency Guidelines that were last revised in June 1992.
- West Nile Virus: In June 2001, Lincoln Park Zoo and the Centers for Disease Control and Prevention co-hosted a meeting to discuss the feasibility of integrating Zoos in to the national West Nile virus surveillance system.

Accreditation and Membership
- New Institutions: AZA re-accredited 30 current institutions for another five years. In addition, AZA accredited 12 new institutions, and two new related facilities. AZA now has a total of 201 accredited institutions.
- Accreditation Standards: AZA continues to strengthen its accreditation standards. This year, additions to the standards include evaluation of enrichment items and requirement for institutional collection plans. AZA has also enhanced its training program for accreditation inspectors and developed an orientation session for institutions preparing for accreditation.

For more detailed information please visit the AZA website: www.aza.org

Submitted by Michael Hutchins, AZA
CZA India Regional Report

Central Zoo Authority

In India the functioning of the zoos is regulated under an Act passed by the Parliament of the country. This Act, known as, Wildlife (Protection) Act, provides legal framework for laying down standards and norms for housing, upkeep, veterinary health care and administrative framework for proper management of the zoos. These norms were formulated in 1992 and are known as “Recognition of Zoo Rules”. Central Zoo Authority has been given the mandate to oversee and regulate the management of zoos in the country. It is an autonomous body headed by a chairperson (Minister, Environment and Forests, Government of India), a Member Secretary and ten members, out of which three are officials from the Ministry of Environment and Forests and the rest seven are non-officials having background in zoo management and designing, education and outreach, veterinary profession and animal welfare. The Central Zoo Authority is reconstituted every three years. The present Central Zoo Authority has been reconstituted on 1 March, 2001.

Accreditation To Zoos

283 zoos which are operational were evaluated by the Central Zoo Authority with respect to Standards and Norms prescribed in the Recognition of Zoo Rules, 1992. Out of this only, 177 large, medium, small and mini zoos were found have potential to come up to the requirement of the Recognition of Zoo Rules, 1992, and consequently been granted conditional recognition by the Central Zoo Authority. Out of these 177 zoos, which are currently recognized by Central Zoo Authority, 120 zoos are small facilities, which are classified as Mini Zoos or Deer Parks. These zoos display very few species of animals viz. Axis axis, Cervus unicolor, Antelope cervicapra and common species of birds and reptiles. The rest of the zoos numbering 57 are major zoos in the country housing a total of 34,375 animals as on 1.4.2001 (Mammals - 12,028, Birds - 14,503, Reptiles - 7844). Central Zoo Authority brings out a compilation every year giving inventory of all these 57 zoos giving species wise information on their numbers including births, deaths, disposals & acquisitions. This document is made available to all zoo personnel, animal welfare organization and NGOs.

Out of the aforesaid 57 major zoos in the country, 14 zoos have been found non-viable at their existing site and therefore are being relocated to new sites. Apart from this, eight zoos have been asked to undertake complete renovation at the existing site itself as per a duly approved layout and by constructing open naturalistic enclosures in place of closed bar and cage type enclosures. Five zoos, which have not found to be complying with the guidelines of Central Zoo Authority have been asked to close down.

The zoo management in India suffered a serious crisis due to 13 deaths of tigers in about a fortnight in June - July,2000 in a zoo in the State of Orissa. This sad episode underscored need for reappraisal of the management of the zoos in the country.

In order to bring about a holistic change in the functioning of the zoos in India, the standards and norms in management of zoos prescribed in 1992 was amended on 10 July, 2001. As a result of these amendments, the zoos are now required to be more accountable to conservation of endangered species of wild fauna. Minimum qualifications have also been fixed for the personnel at the level of Curators and veterinary officers. In order to meet the biological and behavioural needs of the zoo animals, minimum dimensions for the paddock area have also been prescribed for important mammalian species.

Rescue Centres For Circus Animals:

Central Zoo Authority has been given additional responsibility of rehabilitating 360 Tigers and Lions with circus in the country by creating Rescue Facilities for these animals. Accordingly rescue facility have been created for housing these animals at five locations in the country. These centres are not part of zoos, but are located in separate complex away from it. A separate set of staff have been deputed to look
after the animals. No breeding of these animals is to be allowed. The main aim is to give these animals a quality living for rest of their lives at these centres.

Assistance to Zoos for Upgrading Housing and Healthcare Facility

The Central Zoo Authority continued to provide technical and financial assistance for upgrading the housing and veterinary facility in the zoos. A total of US$ 2 Million (Rs 9 Crores) was released to the zoos during the financial year 2000-2001.

Training Programmes and Workshops

A fifteen-day course for Zoo Directors, on “Management of Endangered Species in Captivity” was organised at Vishakapatnam during February 2001. Regional courses for training of zoo keepers were organised by the Kanpur Zoological Park; Assam State Zoo, Guwahati; Nehru Zoological Park, Hyderabad; Sri Chamarajendra Zoological Park, Mysore; Nandankanan Biological Park, Bhubaneswar and Arignar Anna Zoological Park, Chennai.

Shri B.S. Bonal, Director, National Zoological Park, New Delhi and Dr. Abhijit Biswas, veterinarian from Alipore Zoo Kolkata were deputed by the Central Zoo Authority for attending a short course on conservation of endangered species at the summer school of Durrel Wildlife Conservation Trust, U.K.

An annual workshop of Zoo Directors from all major zoos of India was organised during February 2001, with a focus on collection planning of animals in zoos and conservation breeding of endangered species of wild fauna. A workshop on planned breeding of Pheasants was held in collaboration with the World Pheasant Association (WPA), at Morni in the State of Haryana. Zoos exhibiting endemic endangered pheasants participated in the workshop as resource persons. The Vice presidents of WPA, Mr. Garry Robbins and Mr. John Corder and honoured guest of WPA India and CZA participated in the workshop.

As a follow up to the workshop, a regional training programme is proposed to be conducted in Himachal Pradesh very shortly.

First annual convention of the Association of Indian Zoo and Wildlife veterinarians was held in New Delhi during the month of April, 2001. A workshop was conducted by the Association on “Basics of Captive Wild Animal Management” in collaboration with the Central Zoo Authority and Indian Veterinary Research Institute.

Planned Breeding Programmes and Research

Central Zoo Authority is actively pursuing the planned breeding of the endangered species of animals in Indian zoos. Among the important births that happened during the year under report were 18 *Cervus eldi eldi*, 14 *Cervus duvauceli duvauceli*, 5 *Panthera uncia*, 7 *Panthera leo persica*, 4 *Ailurus fulgens*, 1 *Manis crassicaudata* and 4 *Caloenas nicobarica*.

The Central Zoo Authority, in collaboration with the Wildlife Institute of India, has prepared national pedigree books for 5 species, namely Bengal Tiger, Asiatic lion, One horned Rhino, lion tailed macaque and Golden langur.

A Laboratory on Conservation of Endangered Species (LaCONES) is being set up adjacent to the Nehru Zoological Park, Hyderabad under the Centre for Cellular and Molecular Biology. The Central Zoo Authority and Department of Biotechnology, Government of India are providing financial assistance for the Laboratory. Once set up, the Laboratory will carry out the following functions:

i. Monitoring of genetic variation by DNA fingerprinting.

ii. Establishment of gene bank

iii. Semen analysis

iv. Determination of time of ovulation.

v. Artificial insemination and

vi. In vitro fertilization and embryo transfer in wild animals.

Publications:

The Central Zoo Authority in collaboration with the Indian Zoo Directors Association (IZDA) and Association of Indian Zoo and Wildlife Veterinarians (AIZWV) has brought out the 3rd volume of the Compendium on “Health and Disease Management”, a handbook on the “Dietary Husbandry of Wild Mammalia” and “Restraint and Translocation of Wild Mammals”.

Submitted by Sally Walker
The European Association of Zoos and Aquaria (EAZA) held a three-day long future search meeting in early April 2001 in St. Aignan (France) to discuss strategic issues and to determine action priorities for the next few years. A draft “Strategy for the Beginning of the 21st Century” is the first result of the planning process that will be ongoing for considerable time in order to involve all members, committees, special interest groups- and in fact the entire European zoo and aquarium community- in the reflection on their common future.

**Collection Planning, TAGs, EEPs and ESBs.**

**Collection plans**

At the annual meeting of EAZA TAG chairs in Aalborg (Denmark) on 19 September 2000, it was agreed that all TAGs would have at least the first version of their regional collection plan ready. Afterwards, was the need to work on standardising the regional collection plans and their implementation. To this end, the 2001 EAZA Conference in Prague has collection planning as one of its two main topics.

**REGASP**

In November 2000 a meeting was held at the EAZA Executive Office (Amsterdam) in which several EAZA TAG chairs and Kevin Johnson of ARAZPA participated, and where the needs for an EAZA version of REGASP were determined. The EAZA version will be ready for demonstration and use by the 2001 Prague conference.

**Lower Vertebrates and Invertebrates**

EAZA recognises that lower vertebrates and invertebrates have been and to a large extend still are quite neglected by the zoo community outside the specialised aquaria. A three day meeting of the various TAGs that cover these taxa is planned for Spring 2002.

**EEP Animals at Institution that Leaves EAZA Membership**

When the EAZA membership of an institution is terminated, or if an institution closes down, EEPs may be faced with a situation where important animals are moved out without any involvement of the coordinator and thus lost for the programme. Legally there is little that can be done to retain the animals at such an institution in the EEP. EAZA will prepare a document to convince EU member states to make it compulsory - in the framework of the EU Zoos Directive - to contact EAZA about placement of important animals in case a zoo is closed.

**New Programmes**

All TAGs, EEPs and ESBs and their respective coordinators can be found on the EAZA website ([www.eaza.net](http://www.eaza.net)).

**Inter-regional Cooperation**

EAZA TAGs, EEPs and ESBs are actively stimulated to cooperate closely with their counterparts in other zoo regions. Especially in the development of long-term plans, such as regional collection plans developed by the TAGs, it is important that the various regions do work closely together to make the best use of the limited resources that are available to us.

EAZA and ARAZPA are also seeking successful and sensible ways to cooperate more closely in the inter-regional management of a number of species.

**Publications and communication**

**Yearbook**

For the first time ever the Yearbook will be published as (707 page thick) hard copy and on CD-ROM (and thus be ready for immediate publication on the EAZA Resource Centre once this is established).
EAZA Resource Centre
The EAZA website will shortly contain a ‘members only’ area which can be entered by EAZA members with the use of a unique password. This area will contain loads of useful information, such as the Yearbook and EEP and ESB annual reports, husbandry guidelines, minutes of various meetings, the Available & Wanted List online, etc.

TAG Survey
The EAZA TAG Survey ninth series was published, covering: amphibians; Asian freshwater turtles; Pelecaniformes and Podicipediformes; storks; threatened waterfowl, swans and screamers; megapodes and grous; hornbills; pigs and peccaries; and cattle. Some 250 European zoos provided animal inventory and collection planning data to assist in making this cooperative effort a success.

EAZA in situ Conservation Database
The EAZA Annual Conference in Prague will provide the venue for the EAZA Conservation Committee to present the EAZA in situ conservation database. Information on the nature and scope of in situ conservation projects supported by EAZA members will be included in the database. A CD-ROM with software for easy data entry will be distributed to all EAZA members in Prague.

The EAZA in situ Conservation Database will be available on the web in due course. Members will then be able to go online to enter current data on their own work and to generate various reports on all EAZA member projects and -most importantly- to search for projects they too would like to support.

EAZA Campaigns
Bushmeat
The European Association of Zoos and Aquaria’s efforts to help address the bushmeat issue continue strongly with our EAZA Bushmeat Campaign. The main thrust of the campaign, which is supported by IFAW, the International Fund for Animal Welfare, is to raise awareness of the issue among our millions of zoo visitors and to collect signatures for a petition aimed at leaders in the EU and at African leaders. For more about the Bushmeat Crisis see pages 19-21.

Rainforest
For information on the Atlantic rainforest of coastal Brazil campaign see page 35.

ISIS European Branch Office
Since the end of 1999 the EAZA Executive Office acts as the ISIS European Branch Office. This office has two main aims, being 1: increase of ISIS membership among EAZA members, and 2: increasing quality and quantity of data provided by EAZA’s members to ISIS.

Various Issues
English Language Courses
EAZA has at its inception adopted English as its language course. Since the association has members from 34 different countries, where probably well over twenty-five different languages are spoken, the EEP Committee accepted a proposal to partly fund English language courses for zoo staff who are involved with or want to become involved with the running of a TAG, an EEP or an ESB.

Legbands
The EAZA Executive Office initiated a service through which EAZA members can order high-quality coloured legbands for birds. Initially legbands for flamingos and pelicans have been provided, and this proved to be a major success with well over 3,000 bands ordered.

Giant Pandas
Representatives of the Berlin Zoo, Chester Zoo, Vienna Zoo, the EAZA Bear TAG and the EAZA Executive Office met at Amsterdam Airport on May 9 by invitation of the Ouwehands Zoo, Rhenen (Netherlands). Keeping giant pandas in European zoos as well as in situ and ex situ research were among the topics extensively discussed. Submitted by Koen Brouwer
The African Preservation Programme (APP) is a co-operative conservation management programme administered by a standing subcommittee of PAAZAB (Pan African Association of Zoological Gardens, Aquaria and Botanic Gardens).

**New Mission Statement**
The co-operative management of species. The new mission statement has been approved by the PAAZAB Executive and now allows for non-African (exotic) species to be included in our APP programmes.

**African Mnemonics**
The list of African mnemonics used in our ARKS and SPARKS programmes (ISIS) is currently being updated.

**Studbooks and Conservation Programmes**
During the past year no new APPs were added to our list. A few APPs did not perform due to a number of reasons and have accordingly been re-evaluated by the APP Committee.

There are currently 23-registered APPs.
Ten (10) regional studbooks were published during the past year viz.
- Reptiles (1)
- Birds (5)
- Mammals (4)

The following are brief reports on some of our APP conservation projects.

1. **Madagascan Radiated Tortoise** (*Geochelone radiata*)
   Although no studbook was published in 2000, the 2001 edition listings have increased from 98 to 128, of which 97 are living. However, 43 of these are held in Mauritius and relatively unavailable to the South African portion of the propagation group. Laparoscopy and DNA sexing is being investigated to assist the hereto inaccurate sex management of our collections.

2. **Blue crane** (*Anthropoides paradiseus*)
The eighth edition of this regional studbook was published in August 2001. Of all registered specimens, 61.4% are captive hatched and 35.6% have been hand reared as opposed to 44.3% parent reared (about 20% are of unknown rearing type).

3. **Southern Bald Ibis** (*Geronticus calvus*)
The current regional studbook lists 185 (61.51.73) individuals of which 88 (30.27.31) are currently living in captivity at five locations on the African continent. Hatchings were recorded at only two institutions.

4. **Wattled Crane** (*Bugeranus carunculatus*)
The first edition of this studbook was published last year and has 122 historical listings of which 41 are living.

5. **African Wild Dog** (*Lycaon pictus*)
During the year 2000 there were 71 (21.20.30) births, 24 (5.1.18) deaths and 10 (3.7.0) releases. The total living population on record at the end of 2000 was 313 (132.121.60) an increase of 24.7% over the previous year.

6. **Cape Grysbok** (*Raphicerus melanotis*)
The 2001 regional studbook gives a historical listing of 116 (51.61.4) individuals of which 48 (19.27.2) are living in South African institutions.

Submitted by Dr Ferdi R Schoeman (APP Chairman)
Jaguar PHVA Workshop

November 27 December 1, 2000

With the participation of 45 persons from universities, governmental agencies and staff of the Mesoamerican Biological Corridor Program, the status of the jaguars in the Region was analyzed on a country by country basis.

The studbook of the species, presented by AMACZOOA, was also analyzed.

A conservation strategy, that included husbandry, genetic management, education and veterinary programs, was established by the participants.

This workshop was facilitated by Dr. Ulysses Seal, President of CBSG/SSC/UICN, with the support of Dr. Phil Miller of the same institution. It was financed by Chester Zoo and AMACZOOA. Two persons from WCS Jaguars Program, Scott Silver and Kathleen Conforti participated and explained the work that they are doing in the Region. The report is in preparation.

In-situ Conservation Project Identification Workshop, World Association of Zoos and Aquariums (WAZA), Latin America and the Caribbean.

January 22-24, 2001

At request of WAZA, AMACZOOA organized the Workshop, held at Simon Bolivar Zoo, San Jose, Costa Rica. Thirty-five Zoo Directors participated from Argentina, Chile, Brazil, Uruguay, Peru, Ecuador, Colombia, Venezuela, Nicaragua, Honduras, El Salvador, Mexico, Guatemala, Cuba and Costa Rica. Representatives from the principal Zoo Associations also participated in the workshop. Two reports of this meeting, one in Spanish and the other in English, were produced.

Cuban Plants CAMP II. The Serpentines


This workshop was facilitated by Yolanda Matamoros, with the support of Sonia Alpizar. Seventy-two species of three serpentines ecosystems were analyzed by 25 Cuban botanists. During the last day, recommendations for the conservation of these ecosystems were produced. There was a consensus that the serpentines are part of the Cuban natural heritage. A report was produced and printed.

Mexican Manati PHVA

ZOOMAT, Chiapas, Mexico, April 2-6, 2001.

Forty specialists in manatees and stakeholders from the Southern part of Mexico met at ZOOAMAT to analyze the situation of manatees in the region. Four working groups were established: population biology, education, law enforcement, and community. The results of their work showed a detailed analysis of different aspects of the conservation of the species, the recommendations were according with the economic situation of the towns, villages, researchers and educators present. The draft report is under revision by the participants. The workshop was financed by Sea World Orlando.

Zoo Conservation Strategy

During the week of July 23-27, Dr. Ulysses Seal facilitated the beginning of the Zoo Conservation Strategy for FUNDAZOO, the foundation that runs the two governmental zoos of Costa Rica. This process will continue during the third week of November.

Reports Finalized

Cuba Animals CAMP 1998
Cuba Animals CAMP 1999

Translation

During this year the office translated the CAMP electronic program to Spanish. Submitted by Yolanda Matamoros
CBSG South Africa Report

Introduction
CBSG South Africa, just over a year old, operates under the banner of the Endangered Wildlife Trust, one of the largest conservation non-government organisations in Southern Africa. CBSG South Africa (CBSG SA) has a membership of about 50, which is growing rapidly.

Activities during 2001
Global Cheetah Conservation Action Plan Workshop
Held in South Africa from 27-30 August 2001, and facilitated by Susie Ellis, it was attended by 53 delegates from 10 countries. Working group topics included education and communication, veterinary and research, census methods for cheetah, conservation of cheetah outside of protected areas, coordinating in situ and ex situ data collection and analysis and studbook management. This workshop also resulted in the establishment of a global Cheetah Interest Group (CIG) which will be formalised at a follow up workshop to be held in Johannesburg in July 2002. CBSG South Africa is currently the acting secretariat of the CIG.

Blue Crane PHVA
Held in the Cape 1st – 4th October 2001 and was facilitated by Yolan Friedmann. Phil Miller and Onnie Byers assisted with “remote” facilitation and Vortex modelling via e-mail due to cancelling their trip to South Africa after the New York attacks.

PAAZAB
The Pan African Association of Zoos, Aquaria and Botanical Gardens (PAAZAB) annual meeting was held from the 19th –22nd June 2001. Yolan Friedmann delivered a report-back on CBSG South Africa with much enthusiasm being shown for CBSG in general.

CBSG and WAZA Annual Meetings
Yolan Friedmann also attended these meetings on Rottnest Island in Australia in October 2001. Reports in CBSG South Africa and the EWT were delivered.

Bushmeat Crisis Task Force
CBSG South Africa is investigating ways of establishing a closer relationship between the EWT/CBSG SA and the Bushmeat Crisis Task Force (BCTF) regarding the bushmeat crisis. Michael Hutchins of the AZA delivered a report-back on the BCTF at the PAAZAB meeting and discussions were held regarding involving the EWT/CBSG SA more in their efforts to raise awareness of this issue and to partake in grassroots projects addressing it. The EWT is involved in many community conservation and educational projects and through the CBSG SA/EWT network there is much room for collaboration and cooperation.

Funding
A BIG Thank-you to the following for supporting CBSG SA:

- Vision Computers: Laptop computer.
- Nestle: Funding for equipment and training.
- British Airways Assisting Conservation.
- The Lomas Wildlife Trust, CBSG and the EWT: Core funding.
- PAAZAB: Sponsored registration of the annual conference.
- Bill Yeowart: Core funding.
**Plans for 2002:**

**Structure**
The EWT and CBSG have supported the motion to develop CBSG SA into a full-time project with Yolan Friedmann running CBSG SA as a full-time project under the EWT banner.

**Sea Bird CAMP:**
A CAMP for 15 species of sea birds will be held between the 4th – 8th of February 2002 in Cape Town. The Avian Demography Unit of the University of Cape Town is hosting the workshop which will be facilitated by Onnie Byers.

**Blue Swallow Action Planning Workshop:**
To be held from the 10th - 14th of June 2002 in conjunction with BirdLife South Africa. The Blue Swallow is the most endangered bird in South Africa but has an enormous range of approximately ten Southern African countries – hence this workshop will attract participants from across Southern Africa.

**Honey Badgers**
A conflict resolution workshop for honey badgers, which are persecuted at an alarming rate in South Africa, is being planned for 2002. A PHVA for the two South African honey bee species (Apis Scutelatis and A. Capensis) has also been requested and will be held in November 2002.

**VORTEX Clinic**
This will be a five-day course and will train users on the Windows version of VORTEX. Dates are still to be finalised but will be around April or June 2002.

**South African Mammal CAMP**
CBSG South Africa and the Endangered Wildlife Trust will be undertaking a CAMP for the land and sea mammals of South Africa between the 22nd and 27th of March 2002. The CAMP is being done as a means of updating the current Red Data Book for South African mammals which was done in 1986 (Smithers). CBSG SA will be driving this process which will be facilitated by Onnie Buyers, John Williams and Craig Hilton-Taylor from the IUCN Red List Office. The project has a number of partners including the University of Pretoria, the National Research Foundation and other South African government departments and conservation organisations.

**Biological Resource Banking Workshop:**
An update to the 1994 GRB workshop has been proposed for May 2002 as a precursor to the annual PAAZAB meeting. This workshop will bring together the different projects working on collecting and banking biological resources from wildlife and indigenous livestock in South Africa and to develop a combined strategy to further develop BRB as a conservation tool for South African natural resources.

**Disease Risk Workshop**
Doug Armstrong (Omaha’s Henry Doorly Zoo) has proposed that the next Disease Risk Workshop be held in South Africa in September 2002. This workshop will be hosted by CBSG South Africa and the National Zoological Gardens of South Africa and will offer the local conservation and research community an opportunity to explore, become familiar with and assist in further developing the tools and programmes available for quantifying, analysing, characterising, and dealing with diseases in wildlife populations.

Submitted by Yolan Friedmann
CBSG South Asia Report

CBSG, South Asia is an activity of Zoo Outreach Organization, ZOO, in collaboration with the Wildlife Information Liaison Development, WILD, in Coimbatore. ZOO also hosts CBSG, India which was the first CBSG network, started in 1991. CBSG, South Asia was formed to integrate activities of different CBSG national networks in South Asia and to catalyse and facilitate CBSG workshops in other countries of South Asia.

Objectives
- To maintain and support taxon networks for the region.
- To advise and assist CBSG national networks in South Asia.
- To provide impetus for CBSG workshops and specialist training in the region.
- To provide technical and educational material to zoo and wildlife personnel in the region.
- To bring taxon specialists from the region to the attention of SSC, IUCN.
- To organize at least one significant conservation event per year involving all countries and both zoo and wildlife persons.

Obstacles
South Asia is the area that used to be called the Indian subcontinent. It consists of Bangladesh, Bhutan, India, Maldives, Nepal, Pakistan, Sri Lanka. The region has immense political, social and economic problems which present frequent and serious obstacles to conservation action. Much of the energy of CBSG South Asia goes into attempting to find a neutral venue for an annual meeting and scheduling meetings which have to be cancelled due to some of these problems.

Regional Zoo Association Project
In 2000, CBSG, South Asia organized a series of events in Kathmandu, Nepal which resulted in the initiation of a South Asian Zoo Association for Regional Cooperation. This zoo association is an important project of CBSG South Asia because, due to the nature of the region and its institutions, our membership consists mostly of field biologists and academics and we have to work to involve zoo directors.

The Kathmandu meeting was full of good results, some of which are listed below, taken from a Report from the Karachi Zoo and Safari Park which made significant changes:

Karachi Zoo & Safari Park  a) changed their focus to indigenous animals suitable for *ex situ* conservation, b) started maintaining records of animal origin for the first time, c) initiated habitat development of enclosures according to ecological principles, d) established contact with Sindh WL department and private zoos for improvement of cooperation for breeding of indigenous fauna, e) conducted a visitor survey and focused an education programme around it, f) got education budget equivalent to $200,000.00 (200,000 Pakistan rupees) for zoo and safari park, g. initiated improvement / development of signage, initiated cooperation with local experts such as WWF, Zoological Survey of Pakistan and IUCN.

In Other Countries
Bangladesh — a Government sponsored Redevelopment programme for Dakha and Rangpur Zoos was initiated and zoo personnel sent for further training by IUCN country office.
Sri Lanka — Lyn de Alwis, former Director of Colombo Zoo, became SAZARC advisor.
India — increase in educational activities and budget by participating zoos run by steel and municipal authorities.
Nepal – Director of zoo won an award.

Membership
CBSG South Asia has 49 members. Membership focus goes to the national networks, which have many members. Membership in CBSG, South Asia is primarily for persons with interests in more than one country in the region and zoo directors who have attended the regional CBSG meetings.

Taxon Networks
A unique feature of CBSG, South Asia is its taxon and disciplinary networks, based on the concept of IUCN SSC Taxon Specialist Groups. These groups consist of the following subjects and members:

- Invertebrate network 398 + members
- Amphibian network 176 + members
- Reptile network 130 + members
CBSG, Sri Lanka

Anslem de Silva, Convenor

CBSG, Sri Lanka has over 50 members. CBSG, Sri Lanka assisted with planning of CBSG, South Asia meeting which had to be cancelled this year and will be assisting next year when we re-organize the programme. Other than that, we have had research and discussion meetings with active members on how to solve various conservation problems. Some projects are:

- Status and Ecology of the Golden Gecko Calodactylodes illingworthi.
- Herpetological Fauna Assessment of Mahaweli River Basins.
- Establishment of the Amphibian and Reptile Research and Conservation Centre.

CBSG, Nepal

R. K. Shreshta, Convenor

CBSG, Nepal had its inaugural meeting in August 2000 when the organisation also hosted the first CBSG, South Asia meeting. CBSG, Nepal has 21 members and will have a planning meeting soon. A PHVA for Red Panda may be the first project. Other PHVAs for Wild buffalo, Rhinoceros and other species are under discussion.

Sponsors of Networks and Events

Dr. Nan Schaeffer via CBSG
Chester Zoological Gardens, U.K.
Lord Derby, Knowsley Park, Liverpool, U.K.
Lord Robin Russell, Windsor Safari Park
Bat Conservation International for CAMP
Conservation International
Primate Conservation, International
Flora and Fauna International
DAPTF, SSC, IUCN
Thrigby Wildlife Park, UK
Wildlife Information Network, UK
Koln Zoo, Germany
Appenheul Primate Park, Netherlands
St. Louis Zoo, USA

Submitted by Sally Walker
 CBSG News: Regional Reports

CBSG Indonesia Report

• 15-20 January 2001, Indonesian Primate CAMP Workshop

Indonesia contains among the most diverse array of primates on the earth. From the 32 families of primates in the world that are protected, most of them are Indonesian endemic primates, and Indonesia is home to every type of primate. During the last 10 years, Indonesian primatologists have increased the effort to monitor the status of in-situ and ex-situ primate populations.

Taman Safari Indonesia hosted a Primate CAMP Workshop to pull together expertise and formulate strategies in a participatory manner. The five day workshop was attended by 72 participants coming from diverse and relevant back ground, such as scientists, field primatologists, conservationists, universities, wildlife agencies, and entrepreneurs.

• 7-12 April 2001 Elephant Management and Vet Medicine Training

Following up the Sumatran Elephant Conservation Workshop 2000 at Taman Safari Indonesia, Flora Fauna International held a workshop about Elephant Management and Vet Medicine. This workshop was a collaboration between CBSG Indonesia and PKA.

• 26-27 September 2001 Sumatran Tiger Rescue Workshop

Regarding the recommendation of the Sumatran Tiger Master Plan, one of the priorities is to make a rescue team for saving the Sumatran tiger alive. With funding from National Fish and Wildlife Foundation, Taman Safari Indonesia held a workshop about the problems with tigers, and techniques for handling conflict between humans and tigers. This workshop involved the National Park and the Department of Forestry from 6 different areas who deal with the conflict.

Submitted by Jansen Manansang
Bushmeat Crisis  
Working Group Report  

The following questions regarding the Bushmeat Crisis were considered:  
1. What has been done to date?  
2. What has failed and why?  
3. What has worked and why?  

The following answers were suggested:  
1. Isolated and limited pilot projects have been attempted: Cane rat farming, eco-tourism efforts, and human upliftment projects.  

2. They have largely failed, which could be due to:  
   - Many African cultures have no history or culture of livestock farming and cannot sustain it.  
   - Western “handout concept” drives many communities to rely on western support.  
   - Demand for wildlife products is still high and therefore demand driven.  
   - Local communities want maximum profit and therefore the trade is driven by finances and not hunger.  
   - Many agreements have been reneged on due to greed.  
   - Tourism is unreliable due to political and economic instability of many African states.  
   - Presence of western sport-hunters in many areas encourages local communities to hunt wildlife as a result of a “why-them-and-not-us” philosophy.  
   - Political and economic upheaval in countries such as Angola, Congo and Zimbabwe drives communities to renege on agreements and makes policing impossible.  
   - Projects which have failed are seen to be short-sighted and did not take into account cultural and political climates. It was felt that continued pressure on African and European governments and increased protection for and improved management of protected areas is the only solution.  

3. In response to the third question of what has worked, Kenya and Uganda were taken as examples, in which the wildlife department and services were privatised (became parastatals) and are managed outside of the government body and corruption and the bushmeat trade has been considerably reduced. These efforts succeeded because they:  
   - Limited number of communities can get involved and as such there exists jealousy between communities who are inclined to sabotage projects.  
   - Focus on protected areas.  
   - Assist local governments to manage their wildlife areas or manage them on their behalf.  
   - Find resources, personnel etc. and put them in place under private management.  
   - Have been managed by African communities themselves but with input and resources from outside (for e.g. Campfire, Maputo Elephant Reserve Game Guard project, Ugandan Wildlife and Kenya Wildlife Services).
- Audit projects (third party) to evaluate their success and effective use of funds and resources.

**Resolutions**

1. Institution building needed:
   - Targeted protected areas increased.
   - Develop institution building.
   - External influence and support.
   - Donor community.
   - Political agendas.
   - Political influence.
   - Awareness in West.
   - Understanding of complexities.

2. Zoos can:
   - WAZA petition as per EAZA petition.
   - Increased media pressure.
   - Explain complexities.
   - Invite direct letters of concern (letters etc.) to increase public pressure.
   - Encourage this issue to become part of political agendas.
   - Petition campaigns ongoing.
   - Timber awareness and boycott campaigns – timber-buying policy.
   - Expose issue of zoonotic diseases.
   - “Bushmeat” exhibits in zoos as well as private exhibits.
   - Adopt or partner with African zoos on education campaigns, rehab projects, sanctuaries, capacity building etc.

3. Academics can:
   - Provide expertise to evaluate and audit projects.
   - Research effectiveness of projects educating children and women.
   - Field data and research needed on alternative supply issues, supply and demand issues etc.
   - Basic information needed on the issues at hand in order to enable decision making issues.
   - Medical (zoonotics) and veterinary research.
   - Keeping data up to date and relevant.
   - Greater presence on the ground of scientists doing any relevant research.
   - Multidisciplinary approach to projects.
   - Take into account the socio-economic aspects to the issue.
   - Monitor government performance and response.

4. Agencies (NGOs and Government) can:
   - Evaluate projects effectiveness and performance (CBSG?).
   - Need to recognize the complexities of issues and avoid oversimplification.
   - Promote privatisation of wildlife management agencies in African countries.
   - Raise funds to manage wildlife resources privately.
   - CITES presence at African borders (promote law enforcement).
   - Support law enforcement projects.
   - Capacity building within wildlife authorities and officials.
   - Support protection of protected areas.
   - Investigate alternative employment / food production projects.
   - Educate children and women.
   - Partner with human health NGOs on the zoonotic disease issue.
   - Projects dealing with community leaders and mentors who can act as role models for their communities.
   - Promote an ethical and sustainable timber-buying policy.

**Government Agencies**

- Capacity building.
- Control of timber companies.
- Encourage timber certification process.
- Seek and develop political will.
- CITES influence increased (promote law enforcement).
- Take responsibility for the zoonotic disease risk
- Work with other countries which serve as a port or destination for bushmeat
- Increase the role of customs and police departments in confiscating bushmeat at international borders

**Key Recommendations**

1. WAZA needs to take their bushmeat campaign to an international audience
2. Petition the United Nations
3. Utilise the EAZA resources already developed (e.g. reading materials, CDs, TV adverts etc.)
Why WAZA should initiate an EAZA-like Bushmeat petition campaign:
- The zoos of the world have potentially the largest captive audience with a conservation interest.
- It is a very effective way for zoos to exploit their conservation potential without getting into another fundraising appeal.
- The EAZA campaign package is available and could be expanded to include and emphasise regional bushmeat issues.

At present there is:
- A CD ROM with picture materials and display panels and information
- A 30 Second commercial combined with lyrics
- A petition form
- Back up information
- A WAZA petition could be geared to a presentation at the United Nations and EAZA zoos could contribute to signature collection

Zoo visitors who sign the petition would feel that they could make a difference without writing another cheque
- WAZA would require regional and national coordinators to distribute campaign material and to collect petitions

**In Summary**

It is accepted that pilot projects will only have very limited success unless some real political will can be generated. Raising the issue nationally or regionally in this context, will have considerably less impact than if the range country governments are confronted with the fact that the international community cares and is looking over their shoulders. In this context WAZA would be ideally placed to make a difference.

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**Bushmeat Working Group Strategic Statement**

**CBSG recognises the unsustainable harvesting of wildlife (bushmeat) for human consumption as:**
- a crisis of global dimension
- having a devastating impact on populations of species
- posing a complex multi-dimensional challenge to the conservation of biodiversity of the Earth’s tropical regions
- requiring the commitment of national governments, government agencies, international agencies, NGOs, zoos and wildlife facilities to develop a process of change (social and economic)
- threatening human health
- of the highest priority

**CBSG further recognises that the crisis requires:**
- International programmes of awareness and education
- Sustained efforts by the conservation community to bring aspects of the crisis to the attention of national governments and international bodies
- The attention of the IUCN / SSC network as a matter of highest priority
- The application of multi-disciplinary expertise to the understanding of the causes of the crisis including forestry, cultural and economic issues.

**CBSG specifically recommends and endorses:**
- Effective workshops to discuss national and regional bushmeat issues
- The assembly of multidisciplinary expertise to contribute to the development of all relevant issues and to seek solutions
- A sustained global campaign by WAZA to raise public awareness of the complexity of the issues and to bring the issues before national governments and peak international bodies (the UN) – global petition
- Efforts to establish criteria for sustainable management of wildlife within logging concessions as an addendum to the FSC (Forest Stewardship Council) Code of Conduct.
- Regular peer evaluation of conservation projects to ensure that resources applied to the crisis are being utilised effectively (establishment of an international third party NGO for this purpose)
- Efforts to establish unity of view amongst the diverse range of organisations concerned with the crisis including animal and aforesaid rainforest conservation bodies (in particular unity of view regarding logging and forestry issues).
Invertebrate Working Group Report

Developing the regional working group support network

The CBSG Invertebrate Working Group is an affiliation of existing regional invertebrate conservation oriented groups further strengthened by a variety of supportive CBSG colleagues. CBSG provides an international forum where our regional groups can address conservation-breeding and related technical issues. By improving interregional links each group is better placed to address common issues through a mutual sharing of information and materials. We are also better placed to assist the development of similar groups in regions that are currently poorly covered.

There are currently well established Invertebrate Taxon Advisory Groups for the ARAZPA, EAZA and AZA regions. The South Asian region is well covered by the wide-ranging work of CBSG South Asia. The SEAZA and JAZGA regions are also well placed to develop effective internal networks. The key links for these two regions are Biswajit Guha of Singapore Zoo and Dr Hiroshige Takaie of Tama Zoo. The diverse work conducted by these regional groups (CAMP workshops, field surveys, educational initiatives and fundraising efforts, etc) highlights the important fact that our collective remit extends beyond the conservation-breeding role.

In the case of regions not currently covered by a CBSG linked group, it was agreed that there is great merit in examining how we can best interact with related invertebrate Specialist Groups such as the newly formed Southern African Invertebrates Specialist Group.

The group agreed to make a concerted effort over the coming year to enhance networking capacity and assist the development of invertebrate groups in regions not currently covered. In this last regard we will focus particular attention on the Latin American region. To this end, Yolanda Matamoros (CBSG Mesoamerica) will attempt to identify as many invertebrate workers within the region as is possible. It was felt that this formidable task could be greatly assisted by combining efforts with Sao Paulo Zoo’s Dr Flavio de Barros Molina. The INBO network will also be investigated.

Developing a Web-enabled invertebrate conservation support database

The group identified that the greatest hindrances to progress are the lack of effective information and networking tools. There is pressing need therefore to provide the highly disparate invertebrate conservation community (including zoos, museums, universities and field workers, etc) with a free access, Web-enabled database with which to:

- Identify fellow specialists nationally, regionally and internationally.
- Identify invertebrate collections/facilities and their current status (in the above manner).
- Access taxon care guidelines, educational materials and other references.
- Access (at regional and international level) an electronic newsletter and discussion forum.

Detailed specifications for such a system have already been produced as an earlier group action. These were reviewed and we agreed to strip the specifications down to their essential elements necessary for meeting the above key requirements. Reworking the specifications and realising the construction of this tool is now regarded as the most pressing action priority.
Forthcoming SSC invertebrate scoping exercise

Onnie Byers (CBSG Program Officer) outlined the background and objectives of this SSC initiative and we discussed how this group might best contribute to this important and timely review process. Our initial thoughts and suggestion are summarised below:

• We need to include a review of the key problem factors facing invertebrates, how problems may vary in different regions and what the practical requirements are to enable SSC to adequately address these issues.

• We need to clarify the strengths and weaknesses of the current SSC invertebrate network (individually and as a collective whole) and develop a strategy whereby we can realise our common conservation objectives. An analysis of the defunct Invertebrate Conservation Task Force and the successful Declining Amphibians Task Force was suggested as being a useful exercise to help determine problem areas and potential as model for how to design an effective approach.

• As previously noted, the diverse work conducted by the regional groups making up the CBSG Invertebrate Working Group (CAMP and PHVA workshops, field surveys, educational initiatives and fundraising efforts, etc) highlights the important fact that our collective remit extends beyond the conservation-breeding role. This fact needs to be recognised when considering where we fit within the overall SSC invertebrate resource base.

• As many regions currently suffer from a serious paucity of basal field data it is important to recognise the value of active invertebrate conservation groups in these regions. These groups are often best placed to address these data gaps and the need to provide assistance to them wherever possible is clear.

• Enhanced communication and data sharing within and between the Specialist Groups is seen as being perhaps the most important requirement for maximising our collective ability to make progress. In the past it has often been very difficult to effectively communicate with different Specialist Groups. Good communication is essential to our regional groups’ ability to play a key role in areas such as providing essential Red List status evaluation data. Good examples of these cross over roles are the numerous South Asian species workshops and the extensive partulid field status data provided by the EAZA regional group.

• We need to thoroughly examine how the SSC’s new Species Information Service (SIS) Web-enabled database can be best utilised and how it might relate to (or even fill the role of) our proposed network database.
Australian Mammal Working Group Report

Workshop Background and Aim
Australian Zoos are seeking a framework for overseas zoo coordinated/planned exports that provides a clear process for them to acquire Australian fauna. Both overseas and Australian Zoos are seeking a way in which priority Conservation and Research projects in Australia can be supported. Changes, in January 2001, to the Australian Wildlife Protection Act (Regulation of Exports & Imports) 1982 will affect the process and obligations when exporting Australian Fauna. Currently the Australian Region has a few existing guides for the acquisition of some Australian species that will need to be revised as a result of these changes. The aim of this working group is to develop a useful guide for both Australian and overseas Zoos that enables the acquisition of Australian Fauna.

Issues to be Addressed
The working group began by outlining the issues, from a regional perspective, that will need to be addressed in the guide. These are:
1. Background - Flowchart (possibly?).
2. Who to Contact?.
3. Clarity of Process.
5. Staff Training.
6. Exhibit Design.
7. Species Planning.
10. Quarantine Requirements (AQIS).

The working group then developed the elements of a draft guide to be called Guide for Australian Taxa Export or GATE. The following points are the process that a zoo wishing to acquire Australian fauna will need follow.

GATE
2. Overseas regional census and planning clearly outlines import needs over various time frames and with priorities; Australian TAG Convenor informed.
3. Australian/TAG /Species Coordinator incorporate export requirements into species management plans and recommendations.
4. Exporting zoo identified for each transaction – TAG to TAG feedback on availability, timeframes and institutions involved.
5. Exporting zoo contacts overseas zoo;
   Exchange of information on:
   - Exhibit design.
   - Husbandry.
   - Transport.
   - Laws/Permits – both ends.
   - Ambassador Agreements, if applicable.
   - Staff Requirements.
   - Education.
   - Species Management.
   - Conservation & Research links.
   - Quarantine Requirements.
   - Species Specific Conditions, if applicable.
6. Preparation of a Draft Species acquisition plan by overseas zoo addressing items in # 5.
7. Draft Species acquisition plan submitted to exporting zoo.
7a. Finalised in joint consultation (including EA/AQIS).
8. Draft Species plan submitted to Environment Australia (EA) and Australian Quarantine Inspection Service (AQIS).
   a) ‘In principle’ approval of plan (e.g for koala plantation) by EA (plan implementation).
   b) Export application submitted to EA/AQIS.
9. EA/AQIS assess application –
   Either
   a) approve – permit granted.
   b) refuse – letter outlining reasons provided to exporting zoo (revise plan and resubmit).
10. Implement Species plan export.
11. Ongoing liaison between overseas receiving zoo and exporting zoo – Ambassador Agreement obligations.
12. Information and improvements fed back into ‘Guidelines’.

The working group then went on to expand the requirements outlined in point 6. ARAZPA aims to have an agreed final version of all the requirements and the process prior to the enactment of the legislative changes.
Content of Draft (Species) Acquisition Plan

Context of Display
- Education program.
- Breeding program.
- Theme e.g. Australian arid environments.

General Information on Receiving Zoo
- Annual reports (or information as in Melbourne Zoo Annual Report).
- Examples of publications.
- Species held.
- Programs run/participating in.
- Administration/staff structure (vets, etc).
- Map/plan of zoo.
- Climatic conditions.
- Animal management policy e.g. euthanasia.
- Master Plan (if applicable).
- Public display.
- Associations and affiliations.Registrations and licences.
- Animal records system (Consider EAZA accreditation questionnaire as an example of type of information required).

Laws and Permits
Export: EA/Cites – all permits

- AQIS Health Certificate – all species
- State Wildlife Agency – (Tasmanian endemics only?) may vary by state.
- Vertebrate Animal Agency? Eg. NSW EAPA, Dept. Ag.
Import: CITES (if applicable)

- Health Certificate
- Agriculture Dept Agriculture
- USFW justification for their listed endangered species.

Transport
- IATA Guidelines – crates, transit times, temperatures.
- Airline Restrictions.
- Airport Restrictions.
- Koalas – IATA & Australian Export Conditions.
- Macropods – IATA & Australian Export Conditions.
- Individual Country restrictions.
- In Transit Regulations.

Exhibit Design
- Plans – dimensions, internal features, security, shelter.
- Photos, videos.
- Construction materials.
- Environmental enrichment features.
- Veterinary features.
- Interpretation.
- Ancillary physical features eg. Plantations, coolrooms.
- OH&S considerations.

Species Management
- Species selection – choice reasons, mixed exhibits – compatibility.
- Species management plans – breeding, dispersal of progeny.
- Species specific housing requirements – koala conditions, macropod conditions.
- Management policies – euthanasia, handling, commercial activities.

Husbandry
- Keeper expertise – numbers, experience with species or similar.
- Diet – access to appropriate food sources.
- Veterinarian(s) – experience, qualifications, part/fulltime.
- Enrichment.
- Animal Health programs.
- Handling and restraint.

Ambassador Agreements
- Koala.
- Tasmanian Devil.
- Wombat.
- Platypus.
- Other species as required by EA or Australian Zoo/TAG eg. echidna, Threatened species
- Tri-Party Agreement on: species management, interpretation, display theme, reporting, conservation support, husbandry.

Education
- Conservation status.
- Threats – species impact on environment.
- Sources of information.
- Habitat.
- Behaviour.
- Conservation/research programs.
- Biology/Ecology information.
- Interpretation Plan – material, activities.
Global Animal Data Group (GADG) Report

Review of what GADG is

- The Global Animal Data Group (GADG) is an undefined group of people representing zoo associations, zoos and aquariums, and other interested agencies, which share a common view of further developing computerized zoo and aquarium record systems. It has had one meeting last June, in Brookfield Zoo, Chicago, and is planning an additional meeting in the near future.
- Comments were made that the timeframe for development of a new software system must be a long one. One of the reasons that the groups was formed was due to frustrations about the timing of new software systems, and are thinking of writing their own software systems.
- Identified a lack of representation from Asian countries at the initial meeting.
- Concerns by some regional zoo and aquarium associations was that they would like to have more input into the development of future animal records systems.
- Noted that one of the recommendations from the initial meeting is that reports from various regional software development meetings would be distributed amongst the group.
- Noted that there is a wide variety of systems already in place, and the ideas, and data from these should be linked into a bigger system.

Issues raised: Discussion and Recommendations

- How quickly can we get there?
- Open system development.
- Where are other independent developments heading?
- How will they link in with international efforts?
- Issues/discussion about regional-global differences have taken place for years.
- Do we need one system?
- Under represented regions.
- Have more than one half of zoo visitors
- Needs more focus; maybe tap into international aid
- If ISIS is the global system –
  - Unmet challenges of bringing in developing regions.
  - They need help from the neutral non-region source.
- Involvement of resource centers can offer opportunities for funding from new sources.
- There is a need for training.
- Should/could this be offered by regional associations?
- Who do we need to make recommendations to?
- We maybe need a statement (show of force) about the need for neutral collaboration.
- We all want a better system.
- How can we harness the resources of the few big ones (institutions and associations)?
- There are dependencies for finance, data, and expertise.
- Can “someone else” pay for it? Who is the “someone else”?
- There are concerns over time frame and how it meshes with other efforts.
- Need sufficient time and open mindedness to deal with issues and elements that have been raised.
- We need to move animal information systems to a new level.
- Need a mechanism to link the global community to ongoing efforts in other regions.
- Host of database needs to be objective, neutral and inclusive of all participating countries.
- No vested interest of “hosting”.
- No institution or country should derive benefits not equally available to all.
- Host should not have a lobbying role.
- Host not owned by any regional organization.
- Should be recognized that different databases may be “curated” by different organizations.
- Guarantee that the database is not 100% limited to use by zoos, but useful to other wildlife and conservation organizations.
- We need to use the data to get best practices guidelines.
- Meet institutional needs for collection management.
- When and how do we set the priorities for what we will include in the system.
- Need a standardized core data system.
- A better system could be part of a quantum leap, which needs to incorporate in-situ and ex-situ linkages.
• Need to know where you are going (shimmering shore) – but stage your progress towards it.
• The endpoint must be truly international.
• We need to review elements produced by various parties. Should inform any groups which are currently moving forward on development.
• Must be a two-way process – organizations need to be willing to alter their system.
• Data types and ways of recording standards must be truly global.
• At what point should the design and development process be opened to the international community?
• Global community wants to integrate with the developing efforts – the data are fundamental to zoos and to conservation.
• Before we ante up, who is going to own it?
• What are the approaches we take to developers in other regions?
• There should be opportunities to raise funds for a global system.
• We are the stakeholders. As we join in, we want assurances that:
  o it is globally owned, not owned by any one regional organizations
  o at each stage of system development and implementation, global input sought and approvals obtained.
  o Managed independently.
  o Global community is and can do more to contribute data, money and intellectual expertise.
• Identify stakeholders and define a mechanism for communication.
• Concern about delays and slowed schedule, so we need rapid consultation.
• Many animals come from outside the region, so involvement of all regions is important.
• What should ISIS be and do to meet your needs?
• We recognize what ISIS has contributed.
• We embrace the ISIS vision, and international philosophy etc.
• We want to build future systems on the global, collaborative network that is ISIS. Therefore we would like the system developed.

Statement
CBSG applauds the efforts and progress being made in North America, Japan, Australia and Europe to develop needed new animal information systems. Several earlier meetings such as the ISIS Futures Search (February 2000) and the Global Animal Data Group (June 2001) identified the need for a single integrated global system that is capable of providing excellent support for collection management and conservation requirements. Because most collections contain specimens from many regions, collection management depends on reliable pedigree and other data that are frequently held by other institutions around the world.

The governing body of the global information system should include representation of the zoo and aquarium associations as well as the institutions they represent.

New systems may well be needed to replace the existing software. However, any new systems must retain the international cooperation network of ISIS, which currently encompasses 581 zoos in 70 countries, in more than 12 regional zoo associations.

CITES and the Convention on Biodiversity require global data, which need to be from sources seen as neutral and objective. Organizations that have active lobbying functions are not seen as neutral. Therefore, to have credibility with regulators, the ownership and management of any global animal information system must reside within an appropriate international organization.

Our ability to meet collection management needs and widely held conservation objectives will be determined by how successful we are as an international community in adopting an inclusive strategy.
ISIS-STAC Working Group

Review of the past year. Revision and approval of the report of annual activities.

- ISIS-STAC was formed after the need for more advice to come to ISIS from outside of the software development team had been identified.
- Is a group of specialists made up of regional zoo association staff, taxonomic specialists, veterinarians and others.
- Setup as an e-mail discussion group – fast communication, and lack of resources for meeting regularly.
- Has reviewed subjects such as:
  - Level of taxonomic recording. The advice was to record to subspecies level, but store additional information elsewhere in the data.
  - Review of Lineage, a pedigree software package, for potential distribution by ISIS – those who were asked to review the software were unable to do a good review, due to time constraints. It is recommended that future software reviews like this not be undertaken by STAC for time reasons, but instead, the software could be evaluated by the people who have requested the software, ie, users.
  - ISIS web site. Feedback to ISIS has included: the need to display the currency of the institutional data. This has been resolved now by a system of red, yellow and green “traffic lights”; the site has a very thorough security system, and whilst this is critical, it has led to issues of staff being unable to access the site’s security system (delegation of institutional access to the site was provided to institutional directors, and in many cases, this has not been communicated within the institution). The group to advise the ISIS Board that the mechanism of providing access details to institutional directors seems not to have worked. It is recommended that the ISIS representative should be given the authority to assign institutional security. Also recommended that ISIS distribute a hard copy information update about the web site to studbook keepers, institutional directors and institutional representatives.

Membership: Do we need more? who? how?
Noted that there could be more information technology expertise on the committee – most existing members are users of the software.

Communications and mode of operating: Is it working?
- Noted that e-mails sent to discussion groups are generally slow initially, but soon build up momentum.
- Free, and this is an important concern.
- Felt that discussions on a topic should be made amongst members of STAC, and then a summary of the Agreed positions of STAC should be made available to a wider audience, eg e-mailed to all ISIS representatives. Need to make sure that if a recommendation is made that needs to go to the ISIS Board for approval, it might not be appropriate to circulate it to a wider audience before the issue has gone to the Board.

Scope of discussions and STAC activities.
- Should topics discussed by the group be responsive or strategic? Considered that both are appropriate. To date, most issues have been instigated by Nate Flessness or Bob Lacy, but there is no reason why STAC members can’t initiate any sort of topics.
- Should include science policy issues.
- Include discussions on unmet needs.

New issues to be addressed by STAC.
- Access to the data.
- Back to lineage, with more focus.
- Need to address the quantitative genetic relationship between groups.
- How do we manage the data for different life stages, eg spawn, in studbooks, and for management.
- Problems with identification of individuals, eg small individuals, a hive of bees identified as a single unit, which is then split into two hives.
- Formal process for resolving the limits of taxonomic names and disagreements with them.
- Forum for nutrition data issues.
- Are there other areas of data collection that ISIS should be involved in, eg nutrition, husbandry, behavioral enrichment, etc.
Regional association meetings could include an open ISIS-STAC working group meeting to gather input from regional meetings.

- Studbooks – is the current system satisfactory?
  - Do they serve us adequately for program management?
  - Do we need to capture other kinds of data?
  - Should data entry be by a person or distributed users?

- Are there too many steps in collecting the data?
- Processing to resolve discrepancies between studbooks and ISIS data – useful and practical.

Chairmanship: End of interim chairmanship and election of someone for a defined term?
How/when to call for nominations and elect a new Chair for the next two years. The matter is to be discussed with the ISIS Board at its next meeting.

Future CBSG Annual Meetings Working Group

Aim of Working Group
The aim of this working group is to provide insight on the format and themes/content of future CBSG Annual Meetings from the widest possible representation of stakeholders. This would include regional zoo associations, curatorial staff, academics, veterinarians, field scientists, as well as zoo directors.

Overall, there is recognition that CBSG must continue to be current and relevant, and reach a broader-based audience through participation.

The aim of CBSG meetings could be described to produce collaboration with immediate and effective results and to provide a distinctive different opportunity for collaborative effort than that provided by regional zoo associations. “Need to take one thing home that you can use straight away – information that is of immediate use, or one thing identified that you must never do”.

The current structure of the CBSG Annual Meeting in terms of formal presentations and workshops was viewed to be useful.

Areas suggested for development at future meetings
1. Education/Learning Element
The need for a strong education line for all attendees was identified. Key issues identified included bringing delegates up-to-date with e.g. current regulations and guidelines, emerging disease situations, and current reintroduction philosophies (incorporating “lessons learned”).

It was suggested that formal presentations could be commissioned to cover these subject areas through the development of a detailed brief. The major themes/issues could then be used for workshop discussions (the bush meat presentation at this 2001 meeting was a good example).

This structure could then bring people up to speed with progress and information on global conservation issues and address critical and specific issues/problems. If people know that such vital updates would happen, it was considered that they might feel that they had “missed something” by not attending.

2. Themes
It was suggested that there should be no more than 2 – 3 main presentations, addressing no more than 2 -3 main themes that have cross-disciplinary relevance. Such themes should include topics related to the host country (e.g. the European community needs to urgently identify themes in preparation for the Vienna meeting). The possible need for a selection/programme committee was then indicated.

Members should be advised of the selected themes at least 6 months before the meeting and at a timing that allows the costs of attending meetings to be fed into financial budgets. One of the working groups of future CBSG Annual Meetings could be tasked with this responsibility and identify relevant themes for the following meeting and key speakers both within the group and actively seeking opinions and advice from others at the meeting.
At the close of business on the last day it would be possible to know what is on the agenda for next year and then nominate chairmen and allocate responsibility for briefing the chairmen/key speakers.

These presentations could then lead into a working group, and the accompanying notes would serve as background information needed by the participants.

3. Meeting Format
Working groups format was discussed and it was agreed that they were very effective. It was suggested that they should form not less than 50% of total time and be combined with the formal sessions as described above.

The need for monitoring and assessment of the success of the workshops was identified. Surveys should be undertaken of other working groups and it was suggested that no more than half the working groups would change each year to encourage continuity.

It was suggested that there was a need for further encouragement and feed-back for tasks completed (constructive criticism), in addition to explanations as to why task may not (perhaps could not) be completed. This should be reported back to the Annual Meeting, not just Steering Committee, in order that those undertaking the work could attend).

It was recognised that continuity of working groups is needed to produce action (not just the production of reports).

4. Encouraging Attendance: Cross-disciplinary
It may be useful to consider having a title “theme” for each of the annual meetings, with key words, in order to attract broad disciplinary interest (e.g. words such as – emerging diseases; lessons-learned; techniques; reintroduction programmes).

It was recognised that it may be useful to link the CBSG with other organisations (rather than only WAZA) – perhaps animal health based meetings or other wildlife organisations. It may be useful to encourage further collaboration with other IUCN Specialist Groups, particularly

- Reintroduction Specialist Group
- Alien Species Specialist Group

Specific Audience Targets
1. Veterinary Professionals: Zoo Vets, Wildlife Vets, Veterinary Specialist Groups
Vets generally need to identify issues specific to their discipline to justify the time and cost of attending. In particular the Veterinary Specialist Group needs “encouragement” to attend future CBSG meetings and could be consulted on the choice of themes.

2. Zoo Directors
To encourage Zoo directors to attend, subject matter needs to be pertinent and relevant to their zoo or in-situ interests.

3. Field Scientists

4. Curatorial Staff / Zoo Biologists / TAGs
This group of individuals needs the opportunity to discuss conservation, breeding and management issues with colleagues from around the world. They are supportive of the working group activities and will identify areas where more work needs to be done regarding breeding in captivity and reintroduction.

The learning element is particularly important to attract younger generation of zoo professionals. There is also a need to help provide these people with convincing reasons for their attendance in order to gain approval from their zoo directors/institutions.

They are particularly interested in species management and expecting information on conservation, breeding and management. They are attracted by a mixed group of people with diverse knowledge, genetic and demographic information, health etc. Reintroduction issues are important to them (captive and in the field), particularly information on actual techniques / training.

5. Academic Staff
Potential delegates often need a ‘scholarship’ based reason to attend. Consideration could be given to allowing a poster session and/or short presentation/optional evening session. These should be listed in the proceedings (briefing book) to enable the delegate to identify their contribution for continuing professional development purposes and to their employers.
Themes in their speciality areas for special sessions would encourage their attendance. Invitations to deliver plenary lectures will also help to increase attendance by academics.

6. Rescue and Rehabilitation Organisations
If these organisations are to be encouraged, themes/subjects that will attract them need to be identified. (e.g. disease and reintroduction programmes)

7. Regional Zoo Associations / Host countries

Global Influence
With the current rate of development, it was felt that WAZA should have an increased profile, perhaps by providing them with a platform at CBSG meetings. This would hopefully provide feedback to the directors, giving them a better understanding of impacts of policy developments on curators, academic staff, veterinarians etc.

Encouraging Attendance
A critical need for earliest possible announcement of themes for upcoming meetings was identified. It was suggested that one theme per year of international interest (global) would be appropriate.

A keynote speaker (a “star”) may attract delegates, particularly if associated with a theme (e.g. Jackie Chan, Jane Goodall).

Consider conducting a simple PHVA at the Annual Meeting – or a CAMP for 10 – 12 animals (limit the number of species) with local distribution. This could be linked to the overall theme.

The need to research regional concerns where international discussion would be beneficial was identified.

It was suggested that more local “decision-makers” could be invited and sponsored (for example wildlife and zoo directors, TAGs, CAPs and people with national wildlife projects). Commitment should then be obtained in advance so that other delegates who may wish to meet the “decision-makers” would be aware of their attendance. Identifying sponsored delegates could be matched to the theme of the conference.

Members of CBSG could be also be asked to identify collaborators “in country” so encouragement could be given for the attendance of the collaborators.

Consider the idea of inviting ‘observers’ for specific sessions – without need for paying full registration fee – in order to get wide representation from host country specialists / students etc.

Example Themes for Future Conferences
- Emerging diseases and their implications for reintroduction and captive breeding programmes
- International Veterinary Regulations
- Introduction of disease agents into Antarctica and implications for wild populations
- Requirements for disease quarantine measures in the face of climatic change and globalisation
- Tuberculosis in mammals and the implications for reintroduction and captive breeding programmes
- Amphibian mass mortality events and potential conservation impacts
- Contingency planning for Foot-and-Mouth disease
- Current status and implications of West Nile virus
WAZA In Situ Conservation Workshops
Working Group Report

Conservation Criteria for WAZA
It was unanimously agreed that WAZA should endorse in-situ conservation programmes, projects, and campaigns.

Discussions as to WAZA’s coordinating role and its inability to financially support projects led to the following recommendations:

1. **WAZA to co-ordinate campaigns** (i.e. Threatened tropical rainforest) and encourage member zoos to support specific projects (i.e. Survey for the status of primates in Vietnam).
2. **Conservation Committee**: to prioritize and recommend conservation projects for support.
3. **Conservation projects database**: As it is recognized that many WAZA zoos are involved in *in-situ* conservation, set up a global conservation project database building from the EAZA database. The database should be expanded to include an expertise database for skills, regions, habitats along the lines of the IUCN authority list.
4. **Web**: put these databases on the web for easy access by members.
5. **Responsibility**: Conservation projects are the primary responsibility of zoos and regions, not WAZA.
6. **Facilitation**: between zoos and the conservation community.
7. **Funding facilitation** – for conservation projects that it has endorsed.
8. **Endorsement**: of conservation projects and campaigns by WAZA.
9. **Publicity and marketing**: raising profile to both conservation community and general public.
10. **Represent**: on international issues such as CITES, CBD.
11. **Develop a global brand**: see working group report.

Recommendations from CBSG to WAZA for *in-situ* Conservation Work
WAZA recognizes the unique skills and opportunities of its members to assist the many *in-situ* conservation needs of planet earth and the expectations of zoo supporters for zoos to move from their original status of menageries to conservation centers.

CBSG recognizes that individual zoos bringing their individual skills, interests and financial abilities to problems commensurate with these will best achieve this. However, for the purposes outlined below, these projects should be recognized and approved by WAZA. There may be a time when WAZA itself will have direct involvement with large projects, but this is unlikely in the immediate future given WAZA’s present personnel and financial abilities.

Tasks for WAZA

**Establish a data base**
1. Of *in-situ* projects currently supported by members.
2. *In-situ* projects in need of support.
3. Projects already in hand needing further collaborators.
4. Members seeking appropriate projects.
5. Skills available within member institutions.
6. This eventually to be on a website accessible only to members.
7. Make synthesis/report available for WAZA, PR, members on website.

It is fully expected that this database can be built onto the existing EAZA database.

**Form a International Conservation Committee** to evaluate and advise on projects and campaigns so that they may receive WAZA endorsement. This committee should be small, able to communicate speedily by e-mail with the WAZA secretariat and
each other and be empowered to seek specialists’ advice from within the whole zoo, conservation, and academic communities. Project evaluation to be done using both an explicit set of tools such as the ZSL tool under development and an agreed set of utilization-based expectations and needs developed by WAZA Council and members.

Develop the WAZA brand (logo) to include with the following text: ‘World Association of Zoos and Aquariums: United for Conservation’. Zoos are encouraged to obtain the WAZA brand. By the establishment of such a branding process WAZA will be able to capitalize on what its global community is contributing to in situ conservation programmes. At the same time, it is expected that projects will benefit from WAZA branding and WAZA global PR and fundraising.

Initiate worldwide campaigns which may receive the support of all members (eg Threatened tropical rainforest) and encourage all members to support it.

Represent WAZA at international legislative meetings (e.g. CITES and Convention on Biological Diversity).

Seek funds: WAZA should achieve an international status which can assist funding from large organizations within both the private and public sectors.

Encourage Collaboration: WAZA should take care that members working in one region inform, and if possible co-operate, with local zoos, zoo associations and other relevant conservation bodies.

Publicize WAZA member zoos: as centres of conservation excellence using every means possible.

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2002 ANNUAL MEETINGS

HOSTED BY SCHOENBRUNN ZOO,
VIENNA, AUSTRIA

Conservation Breeding Specialist Group (CBSG): August 10-13
World Association of Zoos and Aquaria (WAZA): August 13-17
International Association of Zoo Educators (IZE): August 17-22

We hope to see you there!
Conservation Breeding acting locally: Perth Zoo’s role in Species Recovery in Western Australia

In Australia the majority of mammals that have become extinct (26 species) or are threatened with extinction (29 species) since the arrival of Europeans are in the weight range of 35g to 8 kg. In situ conservation programs in Australia face an unusual habitat management problem – predation by introduced species, the European fox and feral cat. The Western Australia Department of Conservation and Land Management (CALM) aims to recover threatened species in Western Australia through broad scale fox control and a program of species reintroduction. Captive breeding is an action in the recovery of many of these threatened species. Perth Zoo and CALM are working collaboratively to achieve these outcomes.

The Western Shield Program of CALM controls foxes by aerial baiting over 3.5 million hectares of Western Australia’s conservation estate annually. The aerial baiting is achieved using the toxin 1080 and exploiting the differential tolerance to 1080 of the native fauna of Western Australia and the introduced predators. The tolerance to 1080 of native fauna has resulted from developing of tolerance to the high levels of sodium monofluoroacetate which exists in many native plants of Western Australia. The Western Shield program commenced in 1996 and has an annual budget of A$1.5 million.

CALM is the State Government Agency with responsibility for native wildlife in Western Australia and leads the Recovery Teams for each species. CALM has a large research capability in field ecology as a result of the agency’s responsibility for fauna, flora and land management. Like most zoo’s, Perth Zoo does not have a large research infrastructure so has had to seek and develop collaborative links with local and national researchers.

The Native Species Breeding Programme (NSBP) was initiated in 1996 after the Zoological Gardens Board agreed that Perth Zoo become a partner in the Cooperative Research Centre for Conservation and Management of Marsupials (Marsupial CRC). The Marsupial CRC is a research organisation with the aim of developing knowledge and tools for the conservation of threatened populations of marsupials and for management of over abundant populations of marsupials. The objective of joining the Marsupial CRC was to gain access to scientific expertise in reproduction and genetics and establish a culture of science at the Zoo. Dr Mark Bradley was appointed the Director of Research in early 1996 and the NSBP was founded shortly after with keepers appointed to the program and managed by the Director of Research. Perth Zoo supplies approximately 45% of the funding of the program and its infrastructure.

The goal of the NSBP is to provide animals for release by CALM, to conduct scientific research into the reproductive biology of the species in the programme and increase public awareness through the Zoo’s Education programme. The keepers are trained in basic scientific methods, computing and presentation skills. Where possible keepers participate in fieldwork, releases and post-release monitoring thus gaining a good knowledge of the recovery process. Research staff are members of the Recovery Teams which are responsible for the development, implementation and monitoring of the action plans to secure the recovery of these species in the wild.

Perth Zoo has captive breeding programs for seven species – Chuditch, Dibbler, Numbat, Shark Bay Mouse, Greater Stick-nest Rat, Western Swamp Tortoise and Lancelin Island Skink. Each species breeding program is an integral part of that species Recovery Plans.

Each species presents unique problems for its captive breeding and has required knowledge of reproductive biology, nutrition and behaviour to achieve successful outcomes. Since captive breeding began at Perth Zoo 311 Chuditch, 123 Dibblers, 59 Numbats 201 Shark Bay Mice and 313 Western Swamp Tortoises have been provided for release into habitat under regular predator control.
Following the Lion Tamarin Workshop of September 2000, and the success of the first EAZA Annual Campaign, it was decided by the EAZA Council to launch an EAZA Rainforest Campaign 2001/2002 focusing on the Atlantic rainforest of coastal Brasil. The goals of the campaign are to raise awareness about the conservation needs and conservation programmes in the Atlantic coastal rainforest and to raise money for the Lion Tamarin of Brasil Fund. The four lion tamarin programmes will be used as "flagship programmes" for conservation efforts in the region and as models for the development of conservation programmes in general. In addition, the campaign will be used to increase public awareness about other endangered species in the Atlantic coastal rainforest. We hope that this campaign will provide opportunities for zoos to further participate in and support in situ conservation projects in general and the lion tamarin projects in particular.

There are several reasons why the Rainforest Campaign was chosen for the 2001/2002 annual EAZA campaign. As the Atlantic coastal rainforest of Brasil is a priority area for World Association of Zoos and Aquariums' conservation activities, this campaign is in accordance with WAZA recommendations. The development and organization of the conservation programmes for the four lion tamarin species, some now long in existence and built on collaboration of diverse parties, can serve as models for other conservation programmes. Most zoos keeping one or more of the four lion tamarin species also use them as flagship species for their conservation efforts, thus the campaign will also support already existing conservation activities.

The campaign is coordinated by the people responsible for the EAZA Lion Tamarin Workshop in 2000 (Kristin Leus, David Field, Jeremy Mallinson and Bengt Holst), and is supported by IBAMA and the International Committee for Conservation and Management of the Lion Tamarins (ICCM). The campaign will be launched at the EAZA Annual Conference in Prague and will continue until the 2002 EAZA Annual Conference. It is aimed at EAZA institutions and their visitors and will of course be accompanied by regular updates on the EAZA website (www.eaza.net), updates in EAZA News, press releases, etc. A packet with information will be distributed to all EAZA institutions. This packet was produced by the planning group, supported by the species coordinators and European studbook keepers for the involved species. It should be used by the zoos and aquaria in their own way to increase awareness about the conservation programmes and the institutions’ position in these programmes, as well as to create funding for further conservation efforts.

It is EAZA’s hope that the campaign will have a long-lasting effect through a better understanding of the existing conservation programmes and a more direct involvement of the European zoo world. The campaign will thus contribute to the fulfilment of the accepted obligation of zoos “to contribute to animal conservation”.

Submitted by Jeremy Mallinson and Bengt Holst

Several factors contribute to the success of these programmes. We are fortunate the genetic health of the captive populations can be maintained by regular introduction of fresh stock from the wild. Keeping staff are dedicated to the breeding programme and participate in the whole recovery process. Training of keeping staff in scientific methods allows development of sound knowledge of reproductive biology of each species. Suitable microenvironments are developed to allow expression of most natural behaviours. Pre-release protocols are developed to prepare animals for foraging in the target habitat. Collaboration between Federal and State agencies, Universities and research organisations with significant community involvement is well developed and essential for successful outcomes.

Submitted by Terry Fletcher, Director of Research (Perth Zoo)
Conserving Southern African Breeding Seabirds

Introduction
In Southern Africa, as elsewhere in the world, seabirds face a number of threats due to changes brought about by human activity and its consequences. Although many southern African seabirds breed at protected sites, away from the direct effects of human development, they are not immune to these pressures, and a number of them are considered to be at serious conservation risk. Because many species of seabirds have wide distributions, often crossing international boundaries, their conservation status may be improved through internationally-coordinated efforts.

Conservation Status
Most of the 15 Southern African seabird species breed on islands and rocks close inshore of the coasts of southern Angola, Namibia and the Northern, Western and Eastern Provinces of South Africa. A few species and populations also breed on mainland cliffs, coastal dune fields, salt pans, estuaries and inland localities. Of the 15 species, the African Penguin (Spheniscus demersus), three of the four cormorant species, the Cape Gannet (Morus capensis), two of three species of gulls and one of four tern species are endemic to the region.

Nine of the 15 Southern African breeding seabird species are listed in South Africa’s Red Data Book as regionally threatened in one of three risk categories (Endangered, Vulnerable or Near-threatened). Risks facing Southern African seabirds include

- Oil pollution (affecting especially the African Penguin)
- Fishery interactions (both direct mortality from being caught in nets and on hooks, and the indirect effects on food supply of over-fishing)
- Predation by an increasing fur seal population; habitat alteration and loss (e.g. from guano scraping on islands, mainland diamond mining and vegetating dunes)
- Presence of alien predators (such as feral domestic cats Felis catus on Dassen and Robben Islands); and
- Human disturbance from inadequately controlled tourism and recreation (such as off-road vehicles in coastal sand dunes and flats).

Much publicity has recently occurred from the effects of the Treasure oil spill on the African Penguin, and the species’ parilous conservation state. African Penguin numbers have been decreasing for nearly a century and some former colonies have shrunk to extinction. Much less well known is the loss of about half of the very few mainland breeding localities of the Endangered Damara Tern in South Africa to human disturbance and habitat loss to alien vegetation in the last two decades. The South African population is now less than 100 pairs and it may be slipping quietly to extinction within the country, leaving only the much larger Namibian population in existence. Whether the species breeds in southern Angola still needs to be proven.

All South African seabirds are currently protected under the Seabirds and Seals Protection Act of 1973. Most South African (but none of the Namibian) islands are legally protected as nature reserves or national parks. Very few have formally adopted and publicly available management plans. Most mainland breeding sites are not formally protected.

The Bonn Convention
A number of international agreements have the potential to enhance the conservation status of Southern African seabirds, such as

- the Man and the Biosphere Programme of the United Nations Educational Scientific and Cultural Organization (UNESCO)
- the Convention Concerning the Protection of the World Cultural and Natural Heritage (World Heritage Convention)
- the Convention on Biological Diversity (CBD)
- the Convention on Wetlands of International Importance, Especially as Waterfowl Habitat (Ramsar Convention) and

However, the Convention on the Conservation of Migratory Species of Wild Animals (Bonn Convention or CMS) is considered to hold out the most promise for conserving southern African breeding seabirds.

All Southern African seabirds may be considered migratory in terms of the Bonn Convention, since their
ranges cross international boundaries, including into the high seas. A resolution calling for collaborative action inter-sessionally by range states of the Appendix II-listed African Penguin was adopted at the 6th Conference of Parties of the Bonn Convention, held in Somerset West, South Africa in November 1999, giving impetus for the negotiation a Memorandum of Understanding (MoU) by the range states, only one of which needs to be a member of the parent Bonn Convention.

Developing the Memorandum of Understanding
Following the Fourth International Penguin Conference held at La Serena, Chile in September 2000, a conservation workshop hosted by the Conservation Breeding Specialist Group gave full support to a proposal emanating from the Avian Demography Unit that a Memorandum of Understanding (MoU) for the African Penguin be negotiated between South Africa and Namibia, the sole breeding range states for the species (see *CBSG News* Vol. 12, No. 2, September 2001, pp. 20-21). South Africa is a member of the CMS, although Namibia and Angola are not. The need for such an instrument grew out of several previous meetings hosted by CBSG that considered the conservation status of penguins, and of the African Penguin in particular. Such an international instrument would enable collaboration of research and conservation efforts over the species’ full breeding range, and will represent a proactive conservation effort to complement the essentially reactive (but heroic) efforts of those organizations, most especially the SANCCOB Foundation, that are involved in rehabilitating oiled penguins in South Africa.

It is now considered desirable to expand the scope of the proposed penguin MoU to cover all the continental breeding seabirds of the three countries, given that there is much overlap of conservation threats between them and those facing the African Penguin. A necessary preliminary action will be for South Africa to nominate the extra breeding seabird species that share breeding ranges with Angola and Namibia to Appendix II of the Bonn Convention at its next Conference of Parties, to be held in Bonn, Germany in September 2002.

The MoU should contain an Action Plan which, *inter alia*, allows for cooperative research and monitoring, oil pollution contingency planning, adoption of eco-tourism guidelines, production of management plans for breeding localities, especially islands, consideration of the food requirements of avian predators in the management of commercial fisheries and the need for marine protected areas.

**A Southern African Breeding Seabird Workshop**
A Conservation Assessment and Management Plan (CAMP) Workshop to produce a draft MoU and Action Plan, as well as to re-assess the IUCN category-of-threat status of the seabirds, is scheduled to be held in Cape Town from 4-8 February 2002. It will be jointly facilitated by Onnie Byers, CBSG Program Officer and Yolan Friedmann, of CBSG-South Africa. Work has now commenced preparing the background papers for the workshop, including the draft nomination texts for the Bonn Convention. Partial funding has been secured from the African Seabird Group, Namibian Nature Foundation, Penguin Fund of Japan, World Wide Fund for Nature – South Africa, AZA’s Penguin Charadriiformes and Pelicaniformes TAGs and the African Penguin SSP to cover the workshop costs; further applications to support CBSG involvement are pending.

Submitted by John Cooper
Chief Research Officer, Southern African Seabird Conservation Programme, University of Cape Town
International Partulid Programme Progress Report

Field status review
Over the first half of 2001, Dr Trevor Coote pulled together the huge amount of field data as well as all of the previous sets of conservation fieldwork. The executive summary of the resultant report, An urgent briefing report for the French Polynesian Government, associated agencies and the IUCN on the conservation status of the endemic tree snails (Partulidae) of French Polynesia (May 2001) is outlined below.

Executive summary
This briefing document has been produced in response to the latest set of extensive fieldwork conducted earlier this year on the Society Islands. This survey work has re-emphasised the parlous state of the endemic tree snail species on Tahiti (now the last remaining Society Island to retain its endemic tree snail fauna). French Polynesia’s unique tree snail species are of the utmost scientific significance, and play an important role in the ecology of the forests and in the rich cultural heritage of the region. It is now certain that without urgent action these last surviving field populations will be lost as a result of predation by the invasive predator Euglandina rosea.

The report summarises the findings of over ten years extensive field research data that has been generated by a broad range of scientists, conservationists, NGO groups and concerned individuals. Although elements of these data are independent works in their own right and will be published as such, we thought it important to make these data available now so that all those concerned for species conservation in the region can benefit from a comprehensive overview of the now critical situation. Research has demonstrated that effective and inexpensive practical conservation measures could easily be taken to help protect the four surviving Tahitian Partula species (and one Samoana species) from otherwise certain extinction in their natural range, and serve as a mechanism for re-introducing other Partula species that have been lost (see recommendations below).

These documents also contain the key data necessary for the development of a strategic Action Plan to protect the Tahitian species and to prepare the way for the re-establishment of lost Partula species on the other Society Islands. We urge all concerned to take concerted action while there is still time to make a difference.

Conclusions and Recommendations
Development of an in-region conservation strategy for the Partulidae of the Society Islands, to include:
- Urgent action to prevent the otherwise certain extinction of the last remaining partulid species on Tahiti. The most practical conservation measure needed is the ring-fencing of threatened populations in Faaroa Valley which contains representatives of all five species
- Continued surveys, and monitoring of the Tahiti population isolates.
- Urgent surveys to determine the conservation status of the Marquesan Samoana populations
- Continuation of the conservation effort to maintain viable ex situ populations of partulid species. This task is also reliant upon the development of a clear in-region conservation strategy.

Progress with establishing partulid reserves on Tahiti
Partulid Programme members raised the necessary funding for Trevor Coote and Eric Loeve to conduct urgent follow-up survey work in Faaroa Valley and identify the best location for establishing reserves. Working closely with the Polynesian land owners, Trevor and Eric have completed the technical preliminary work and an ideal site has been found that still contains wild populations of all five surviving species. A grant has been provided by the Biodiversity Trust to cover all construction costs. It is planned to establish the reserves before the onset of this year’s rainy
season or, failing that, immediately thereafter.

Husbandry guidelines
Although a series of husbandry and diet trials are still in progress (see *Partula 2001* report) a review of results in respective holding collections has enabled us to produce a full set of husbandry guidelines. These will be available to discussion at the meeting.

Redeveloping the programme studbook database
The last year has seen tremendous progress in the redevelopment of the original studbook database, which has now been expanded to address a more comprehensive set of management considerations (hence the rename: *species management system*). It’s been designed to allow each participating institution to enter its own collection data directly onto the system which can then be routinely uplifted to the central database via a straightforward email attachment.

A lot of thought has also been given to the reporting side and we can now easily pull up a range of demography trend and rate data (including fecundity, death and growth rates). Husbandry guidelines and other practical programme data have also been incorporated.

As the partulid programme is all about group (stage-based) management, we’ve used this redevelopment work as a case study for informing the wider population management issues identified by ISIS. The outstanding need now is to address how we can effectively determine quantitative genetic relatedness within and between populations.

Submitted by Paul Pearce Kelly

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**Bushmeat Crisis**

The out of control trade in bush meat, in many parts of Central and West Africa, appears to be just one more component in a more general crisis scenario. The public and the decision-makers in most first world countries seem to have become increasingly fatigued and frustrated with the cycles of civil unrest, armed conflicts and the resulting humanitarian disasters. While in other parts of the world our political leadership and the court of public opinion found and finds it relatively easy to decide on aggressor and victims - Kosovo and East Timor - this is not the case in Africa. However on the environmental and wildlife fronts the outside observer seems to have less of a problem to decide where he or she stands. Increasing the level of awareness, as far as the seriousness of the bushmeat crisis is concerned, has to be the first step to create the kind of public opinion backlash - as was the case with the ivory crisis, whaling, seal clubbing etc. - where OUR politicians feel obliged to react and act. Once we have their ears and are able to push their fingers towards the purse strings, we might be able to come up with the kind of carrots and sticks which represent real negotiating power when confronting the leadership in the bush meat crisis countries. If we can use the bush meat issue and its potential for a massive public outcry, to push for and assist with better governance in the countries concerned, the ultimate beneficiaries will not just be the great apes, the elephants and the lesser creatures, but the citizens of these countries and their future generations.

What is clear is that the so called “quiet diplomatic approach” of the past has not worked and is not working and that things can hardly get any worse. Maybe time has come to take some more risks, to maybe be politically less correct and demand real ‘cultural change’. As long as our closest animal relatives, the great apes, are staple food for the elite in the urban centers, it judges all of man-kind and us as well as the consumer.

Submitted by Karl Ammann
Javan Gibbon Rehabilitation for Conservation Project

The Silvery Gibbon Project (SGP) of Perth, Australia was established in 1991 to assist the in-situ conservation of the Javan gibbon. Funds are raised through events and activities, generating money from members and other interested people. SGP has been supporting a number of projects in Java to help protect Javan gibbons, with an ultimate aim to build a captive breeding/reintroduction center that was recommended in the 1994 PHVA.

The objective of the center is to receive donated or confiscated Javan gibbons (Hylobates moloch spp) from captive sources and to place them into a rescue, rehabilitation, breeding and reintroduction program. The aim is to assess their medical and psychological health, and to restore these gibbons to full health. The ultimate aim is reintroduction into the wild. This objective however, is not short term as behavioural rehabilitation also involves the gibbons’ abilities to form family groups. Any re-introductions would be based on IUCN recommendations, along with specific guidelines for gibbon reintroduction based on IUCN/SSC recommendations.

The management committee for the center will be made up of selected representatives from a consortium of Indonesian and international stake holders including the PHKA (Relevant Indonesia government department) and be responsible for the long term strategy and policy of the center. The Director (Barita Manullang) of the Project and Assistant Director (Ida Yuniata) are co-opted to the committee.

SGP had raised $30,000 USD and required another $30,000 to construct the centre. In order to apply for funding through the Margot Marsh Biodiversity Fund, SGP required a USA based partner institution. After the Javan Gibbon Workshop held at the International Primatological Congress in Adelaide, Conservation International agreed to apply for matching funds from Margot Marsh. Equal funding was successfully obtained. Land has already been obtained for the centre and construction is to start in the near future.

The scope of the committee will include but not be limited to the following:

Repatriation: Although institutions outside Java will be part of the international captive management of the species, the repatriation and the breeding of the species in-situ will be the priority of the committee.

Return of Title: Holding institutions that become signatories to the Memorandum of Understanding will accept the terms established by the committee. The animals are to be included in a scientifically coordinated breeding program.

International Studbook: Genetic and demographic analysis of the captive population.

Rehabilitation/Reintroduction Guidelines: Will be formulated in conjunction with the conservation plan for wild populations in collaboration with PHKA

For more information about the Silvery Gibbon Project please see the website: http://www.silvery.org.au

Submitted by Leif Cocks, Barita Manullang, and Dianne Gates
**Rottnest Island, Australia:**
An outline of the Island ecology and conservation outcomes

**The Island Geology/Hydrology**
- The largest island in a chain of small limestone islands off the coast of Perth
- Rottnest is composed of Quaternary limestone and dune sand and is fringed by limestone reefs
- Evidence of Quaternary sea-level changes
- Hypersaline salt lakes
- Extremely limited surface fresh water

**Island Fauna**
- Reptiles - snakes (2), legless lizards (2), skinks (14), geckos (2), sea turtles (4)
- Amphibians - Frogs (3)
- Mammals - marsupials (1), bats (1), dolphins (1), seals/seals (2), whales (3)
- Birds - Seabirds, raptors, waders - transequatorial migrants, ducks, woodland species, 112 species recorded
- Fish - reef dwellers, seagrass inhabitants, pelagics, over 360 species (97 tropica1s)
- Crustaceans - crabs, crayfish, hermit crabs, prawns, barnacles
- Introduced species - cats, mice, peafowl, pheasant

**Island Vegetation: Changes Over Time**
- The Island was initially densely covered with an associated woodland of *Melaleuca lanceolata* and *Callitris preissii*
- European settlement in 1831 - clearing for development, farming, salt collection, fire
- Impact of the protection of Quokka
- Impact of increased tourism
- Current status - 170 species, 100 native species

**Conservation Strategies/Techniques for Flora and Fauna**
- Habitat restoration and protection - woodland restoration, weed management, formalised access (walk trails, board walks, beach access) brushing, plantings
- Regulations to protect flora, fauna and landforms - Rangers/Honorary Rangers to ensure compliance
- Procedures for injured fauna
- Eradication project for feral cats
- Monitoring and research
- Education and interpretation
- Sanctuary zones for high conservation value areas
- Bag and size limits for recreational fishing

**The Challenge for Rottnest Island:**
To achieve a sustainable balance with regard to the protection and conservation of the environmental values of the Island and the provision of tourism facilities and services

Submitted by Claire Wright, Rottnest Island Conservation Manager
CBSG ANNUAL MEETING 2001

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  Toni Giezendanner
  David Rimlinger
Zoologicka Zahrada Mesta Brno, Czech Republic
  Martin Hovorka
  Bohumil Kral
CBSG Program Officer Position Available

Required:
· Advanced Degree: PhD, or DVM
· Good social skills
· Willing to move to Minnesota

Preferred:
· Working knowledge of a language other than English
· Working knowledge of GIS

This position provides the opportunity for international travel (25% of time). Facilitation skills will be taught upon hire.
For more information please contact the CBSG office at (952) 997-9800.