CBSG Annual Report **2011**





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FROM THE CHAIR



This is my first Annual Report letter as Chair of CBSG, and I'd like to begin by acknowledging my predecessor, Dr. Robert Lacy. We are indebted to Bob for all he has brought to CBSG, especially his scientific expertise and commitment to integrated conservation. He has consistently shown dedication to the founding values of CBSG: innovation, collaboration, participatory processes, and consensus-based decision making. Bob left CBSG stronger than he found it, and we will continue to benefit from his contributions through his position as CBSG Scientific Advisor.

Under Bob's leadership, we developed our tagline, "Transforming passion for wildlife into effective conservation," which describes CBSG's unique contribution to the conservation landscape. CBSG provides that vital link between those with a stake in the survival of a species (government agencies, scientists, zoos and aquariums, local communities, and conservation organizations) and those who provide effective, on-the-ground conservation. This is an extraordinarily important role, and one in which CBSG is arguably unparalleled in delivering results to the conservation community.

But let's be honest: it is not glamorous. We're the proud and positive supporting actors, not the stars. CBSG is not in a position to fund a game-changing project and, for the most part, we are not doing the basic research leading to groundbreaking understandings of the causes of extinction. Nor are we doing the difficult work of living in the field with a species to which we have dedicated our careers and our lives. Instead, our science-based conservation planning work takes place mostly out of the spotlight, helping you-our members and donors-and other conservation partners channel your money, expertise, research, field work, and passion in the best way possible to increase the probability of survival of our planet's species.

Throughout the pages of this Annual Report, you will find evidence of the critical link CBSG provides among diverse communities and the conservation value of these collaborative efforts. Our work to connect experts from the wild and intensively managed population conservation communities is described in the One Plan Approach initiative article and illustrated in the Southern ground hornbill success story. From our convening of DRA experts to our collaboration with Wildlife Conservation Society landscape ecologists to assess potential viability of jaguar in the southern US, it is clear that CBSG is committed to advancing the cause of species conservation through collaboration.

While we're quite proud of what we've accomplished this past year, we continue to seek, pursue, and develop new and more effective ways to use CBSG's convening power to help you make your best possible contribution to conservation and species survival. The collective power of our staff, regional networks, members, and donors, in collaboration with countless partners and stakeholders around the world, makes CBSG shine like a star, even from behind the scenes. For this, and for your unwavering support of CBSG and of conservation, we thank you all.

Ormie Byers, Chair



WHAT WE DO



CBSG provides species conservation planning expertise to governments, Specialist Groups, zoos and aquariums, and other wildlife organizations.

Using expert facilitation and the application of science-based planning tools, CBSG works collaboratively to save endangered species by increasing the effectiveness of species conservation efforts worldwide.

SAVING SOUTH AFRICA'S SACRED BIRD



Southern Ground Hornbill Facts

- Southern ground hornbills are cooperative breeders. Young males stay
 with their parents as helpers to assist in rearing younger siblings, while
 young females are driven out of the family group.
- In the wild, sexual maturity in females is not normally reached until about 9 or 10 years of age, but it may take even longer for them to become an alpha breeding female and start laying eggs.
- Southern ground hornbills do not always breed every year and on average, a group successfully fledges only a single chick every nine years.



"Thanks for all of CBSG's efforts, from the Southern ground hornbills." -Alan Kemp, Southern ground hornbill researcher

TAKING ACTION FOR NORTHERN JAGUAR RECOVERY



"The outcome of the PVA will inevitably help the Jaguar Recovery Team to establish recovery criteria for the jaguar, while the PHVA will assist with developing recovery actions to meet those criteria. These are both critical components of a recovery plan." —Erin Fernandez Timbadia, Mexico Program Coordinator, US Fish and Wildlife Service

The Situation

Written accounts of jaguar (*Panthera onca*) in northern Mexico and surrounding areas date back to the records of Coronado in 1540. Since then, human encroachment into this wilderness has led to a gradual decline in the jaguar population. By the early 1980s, they were thought to be extinct throughout the northernmost portion of their range in the southwestern US. Isolated sightings in Arizona and New Mexico in the 1990s renewed hope among conservationists that the jaguar could possibly return to its natural habitat. The US Fish and Wildlife Service has initiated a recovery planning process with the goal of recovering the species throughout its range by managing the northwesternmost breeding population and jaguar movement corridors.

The Process

The bi-national (US-Mexico) Jaguar Recovery Team invited CBSG to conduct a population viability analysis (PVA) for the northern jaguar population to evaluate its current demographic status and potential as a source population for dispersal to the north. CBSG collaborated with members of the IUCN SSC Cat Specialist Group, as well as spatial analysts from the Wildlife Conservation Society (WCS), who generated complex habitat suitability models that linked directly with the PVA efforts. A broader PHVA workshop used the results of the PVA in concert with insights gained from extensive discussion to develop a comprehensive set of conservation action recommendations for both the US and Mexican authorities.

The Situation

The Southern ground hornbill *(Bucorvus leadbeateri*) is a globally Vulnerable species (IUCN Red List) with a declining population. This longlived and slow-breeding bird has an unusual cooperative breeding strategy and lives in family groups that require large territories. The complex breeding biology and low reproductive rate of the species render it highly susceptible to threats, including conversion of grasslands into forest, cultivation and degradation of habitat, a lack of suitable nesting trees, poisoning and direct persecution, live trade, and traditional practices. In South Africa, the species is considered nationally Vulnerable and is listed as a Protected Species under national legislation.

The Process

CBSG began working toward Southern ground hornbill conservation in 2005 by organizing and facilitating the first PHVA for this species, which brought together a diverse range of stakeholders. The complex reproductive biology and slow growth rate of hornbills made population modeling and conservation planning particularly challenging. Two subsequent PHVA reviews have been conducted to monitor and update progress, culminating in the publication of the *Southern Ground Hornbill Species Recovery Plan for South Africa* in December 2011.



The Results

The Southern Ground Hornbill Action Group has been formed to coordinate conservation activities, while the conservation breeding program (APP) of the African Association of Zoos and Aquaria (PAAZAB) manages an *ex situ* population of hornbills. Both conservation initiatives meet together at least twice a year to plan and prioritize conservation needs as part of an integrated conservation plan for the species. Field and zoo conservationists work together in harvesting and rearing doomed second chicks from wild nests to provide birds for release into the wild and new potential founders for the conservation breeding program.

Jaguar Facts

- The jaguar is the largest felid in the New World, weighing up to 158 kilograms (nearly 350 pounds).
- Range-wide habitat destruction and modification and illegal killing of jaguars are the two most significant threats to the species.
- The northern jaguar once ranged from the southern US to central Argentina, but is now estimated to occupy only 46% of its historic range.



The Results

The report from this combined PVA and PHVA workshop process will be instrumental to the US Fish and Wildlife Service as they draft their preliminary Jaguar Recovery Plan. As a result of the tremendous interest stimulated by the combined spatial and demographic analysis, CBSG, WCS, and the Jaguar Recovery Team continue to collaborate on the evolving recovery document. Additional workshops will be held in 2012 and perhaps through 2014 with the goal of specifying scientifically sound recovery goals and criteria, thereby strengthening the credibility and validity of the Recovery Plan among the institutions responsible for, and impacted by, its implementation.



EXPLORING NEW APPLICATIONS OF SIMULATION MODELING



Free-Roaming Cat Facts

- The term "free-roaming" refers to both feral (unowned) animals and owned animals that wander the streets and have contact with ferals.
- Millions of cats are brought into US animal shelters each year, with no more than about 10% of them neutered. Up to 70% of those taken in are euthanized.
- Non-surgical sterilization methods may soon become a reality, but until then, traditional surgical methods (spaying and neutering) are a key tool that can be strategically employed to control free-roaming cat populations.
- These animals can be significant sources of predation on native bird and small animal populations, and can also be vectors for disease transmission across multiple species.

"It is ironic that a model developed to understand the population dynamics of endangered wild species populations will be used to understand, and help decrease the population of, an overabundant domestic species. In both cases, however, thanks to CBSG's role in this project, conservation and animal welfare will stand to benefit." - Steve Zawistowski, Science Advisor, The American Society for Prevention of Cruelty to Animals (ASPCA), and Board Chair, ACC&D

The Situation

About 85 million cats are owned in the US, and as many as 70 million additional stray or feral (unowned) cats add to the population. The degree of contact between "free-roaming" owned and unowned cats allows most unmanaged cat populations to maintain rapid growth. Many of these cats show significant welfare deficits, transmit diseases across multiple species, and may be major sources of predation on native bird and small animal populations. There is very little work on the quantitative population dynamics of free-roaming cats, with almost no direct application of simulation modeling techniques that are used with great impact in the endangered species conservation community.

The Process

In June 2011, CBSG participated in a Think Tank meeting organized by the Alliance for Contraception in Cats and Dogs (ACC&D). The goal of the Think Tank was to investigate how population modeling, field studies, and other approaches adapted from wildlife biology could provide guidance for humane management of free-ranging cat and dog populations, including current programs using surgical spay and neuter, and future programs deploying non-surgical sterilants and contraceptive options. The group concluded that the application of simulation modeling, specifically the Vortex software package, to free-roaming cat populations would be a feasible and cost-effective way to generate informative, scenario-specific guidance, especially when supplemented with collection of field data.



The Results

This is CBSG's first collaborative project with an organization like ACC&D that focuses on health and welfare of companion animals and humane management of free-roaming cats and dogs. The analysis emerging from this project and the insight we gain from the results will set the precedent for the future application of traditional population viability analysis tools to the problems associated with free-roaming companion animal population increase, including high levels of mortality among resident bird populations.

BUILDING CAPACITY, CREATING OPPORTUNITY



breeding programs in the future." – James Burton, Chair, IUCN SSC Asian Wild Cattle Specialist Group

The Situation

Escalating threats to wildlife have led to an increasing responsibility for zoos to scientifically manage species for conservation and sustainability. This is especially true in range countries, as management in the first generations from the wild can impact genetic diversity and pedigree data quality. Many hotspots for biodiversity threat, such as South Asia, East Asia, and Southeast Asia, do not yet have well-established programs for recruiting zoo staff to collect, analyze, and use data to conduct scientifically-based management programs. Building capacity in studbook keeping and population management in all regional zoo associations will promote the viability of ex situ populations, both locally within range countries and globally through greater opportunities for inter-regional management.

The Process

Since 2008, CBSG has collaborated with our ISIS and EAZA colleagues to conduct population management training activities in Singapore, Taiwan, Indonesia, China, and Japan. In October 2011, with support from WAZA and numerous zoo sponsors, CBSG partnered with the IUCN SSC Asian Wild Cattle Specialist Group to conduct a population management workshop for 43 zoo and forestry staff, and trained 17 studbook keepers for threatened Indonesian species such as banteng, anoa, komodos, and Javan gibbons. CBSG followed up on our previous studbook training with more advanced population management training for 41 studbook keepers in China (November 2011) and Japan (February 2012).

Ex Situ Population Management Facts

- About 75% of all zoo studbooks and cooperatively managed breeding programs are currently held by regional zoo associations in the US (AZA), Europe (EAZA), and Australasia (ZAA), though a majority of threatened species originate from other regions.
- Capacity building in intensive population management expertise in range countries can facilitate valuable links and promote integrated species conservation planning.
- There are about 1,000 species that have zoo studbook databases. Only 30% of these species currently have studbooks in more than one region, and only 10% are managed intensively in more than one region.
- The population management software PMx has been translated into Chinese, Japanese, and Spanish, facilitating its use in non-English speaking regions.

"The [Indonesian studbook training] workshop was a great success, and all of the studbook keepers were very engaged and worked hard during the four days. We are hopeful that there will be some significant legacy from this training with greater engagement in the international

The Results

Over four years, these training activities included over 200 participants from six Asian countries. Many of the resulting regional and international studbook keepers are being mentored by population advisors in other regions. Experienced studbook keepers in Japan (JAZA), China (CAZG), and Indonesia (PKBSI) served as assistant instructors in the more advanced courses. As a result, JAZA now conducts regular basic and advanced population management courses on its own, and CAZG also conducts studbook training. PKBSI, JAZA, and CAZG all participate in global management programs for species such as the Sumatran tiger, Javan gibbon, red panda, and giant panda.



MODELING HOPE FOR THE WEST INDIAN MANATEE



Manatee Facts

- Manatees are herbivores that feed opportunistically on a wide variety of submerged, floating, and emergent vegetation, leading to the nickname "sea cows."
- Manatee distribution is linked closely with their aquatic vegetation food source, leading them to inhabit coastal and riverine habitats that tend to be close to humans and the threats they pose.
- Manatees have no known natural enemies. Without threats such as poaching and other human-related mortality causes, they are naturally able to maintain viable populations.



"The survival of the West Indian manatee populations in our region will only be possible if all countries unite their efforts under a regional vision on management, conservation, and community education about the manatees' importance in the whole ecosystem." -Alex Gómez, Universidad Nacional-Proyecto Manatí, Costa Rica

The Situation

The West Indian manatee is divided into two subspecies, the Florida manatee (Trichechus manatus latirostris) found only in the US, and the Antillean manatee (T.m. manatus) located from the Bahamas to Brazil, including the Gulf of Mexico and Caribbean Sea. The estimated population size for the species is no more than 9,000 individuals, with more than half of them located in the US, Mexico, and Belize. Small and fragmented populations, along with anthropogenic threats (ship collisions, hunting, entanglement in fishing nets, and habitat loss), led the IUCN to declare the species as a whole as Vulnerable, though separately the two subspecies are considered Endangered.

The Process

Manatee populations straddle international boundaries, supporting the need for a regional conservation approach recognized at the 2004 Costa Rican Manatee PHVA. In 2010, a Regional Management Plan for the West Indian manatee was developed by the United Nations Environment Programme and others, providing a framework for such an approach. In 2011, CBSG Mesoamerica was invited by the Universidad Nacional, Fundación PROMAR, and Tropical Science Center in Costa Rica to build upon these efforts and employ population modeling to assess potential specific management options for the Caribbean region. Stakeholders from seven countries participated in a PHVA workshop focused on detailed conservation options for this species.

The Results

During the PHVA workshop, stochastic models were created to quantitatively assess the impacts of specific threats (collisions, entanglements, poaching, and subspecific hybridization) on manatee population viability. Modeling was also used to evaluate the effects of a variety of management actions, including population supplementation through translocations. Workshop participants used these viability assessments to develop specific recommendations and responsibilities for the establishment of regional activities to promote manatee conservation in the Caribbean.



HUMAN-CHIMPANZEE HARMONY IN SIERRA LEONE



learn more about chimpanzees and be able to figure out the necessary questions that need to be addressed." -Alhaji Malikie Siaka, Gola Forest Programme, Sierra Leone

The Situation

Sierra Leone is home to the second largest wild population of the endangered western chimpanzee (Pan troglodytes verus). More than half of the country's estimated 5,500 chimpanzees live outside protected areas, which can lead to conflict with local communities. Chimpanzee numbers are declining due to hunting for bushmeat or retaliation for crop raiding, habitat loss and conversion due to agriculture, logging and mining, and other threats. CBSG Europe was invited by the Sierra Leone Ministry of Agriculture, Forestry and Food Security to conduct a PHVA workshop to facilitate positive conservation change for chimpanzees in Sierra Leone.

The Process

The workshop was developed in collaboration with the Tacugama Chimpanzee Sanctuary and IUCN SSC Primate Specialist Group and involved about 50 stakeholders, including government representatives, researchers, and community leaders from several chiefdoms. Workshop participants developed a vision: "To ensure a long-term viable chimpanzee population across Sierra Leone in both protected and non-protected areas, maintaining genetic, cultural, and ecological diversity, living in harmony with communities, bringing socioeconomic benefits, and being a source of pride to Sierra Leone." After reviewing the threats and challenges, they identified goals, action steps, and an implementation plan that will ultimately lead to the development of a national chimpanzee conservation action plan for Sierra Leone.

Chimpanzee Facts

- At the turn of the century, an estimated 2 million chimpanzees lived across Equatorial Africa. Today, estimates indicate that there may be as few as 110,000 chimpanzees left in the wild.
- Chimpanzees typically live in tropical rainforests, but their habitat varies considerably and they are also found in secondary regrowth forests, open woodland, and even open savannah.
- For every live infant chimpanzee that arrives at a sanctuary or laboratory, it is estimated that 5-10 wild chimpanzees have been killed. Records of trade and confiscated chimpanzees suggest the loss of at least 25,000 chimpanzees from Sierra Leone in the past 60 years.



"[The PHVA workshop] was highly participatory with a high diversity of expertise—both local and international. It was a real opportunity to



The Results

The PHVA led many core stakeholders to an understanding of the status of and threats to chimpanzees in Sierra Leone. High priority actions included: improving knowledge of specific chimpanzee populations, conservation opportunities, and monitoring to measure the effectiveness of actions being implemented; reviewing existing conservation legislation; promoting awareness of chimpanzee conservation and strengthening environmental education; and establishing a well-functioning network of national parks. A steering committee and national chimpanzee conservation coordinator will be appointed to guide and drive implementation and dissemination of an action plan to key stakeholder groups.



FORGING NEW PARTNERSHIPS IN WILDLIFE DISEASE RISK ANALYSIS

Last year, CBSG reported on our disease risk analysis project in the 2010 Annual Report. We are proud to provide an update on this initiative with the publication of the newly-revised IUCN Guide to Wildlife Disease Risk Analysis, expected in the second half of 2012. Publication of this document, led by our colleagues in the CBSG Australasia Regional Network, will mark a major milestone in CBSG's effort to provide practical tools and processes to the wildlife disease management community. This project has benefited from effective collaboration with a number of our sibling SSC interdisciplinary partners, including the Wildlife Health, Reintroduction, and Invasive Species Specialist Groups. But development and publication of the Guide tell only part of the story. In 2011, CBSG staff, members, and collaborators expanded our activities in the broad and evolving field of conservation medicine.

CBSG is part of a small team of animal and human health professionals that received a grant from the University of Minnesota's College of Veterinary Medicine to study what we have identified as "transboundary" disease risk. Although both agriculture and wildlife conservation communities have invested enormous resources in conducting disease risk assessments for their own ends, virtually no attempt has been made to create partnerships to align risk analysis priorities among and between these communities to address wildlife-domestic animal "transboundary" risks. Our project will create a Minnesota-based transdisciplinary working group to tackle a local disease risk issue, using the IUCN Guide as a primary reference. Following this local application of the Guide, we will lead the creation of an international working group to bring together experts from OIE (World Organization for Animal Health) and IUCN to address alignment of domestic animal and wildlife risk analysis methods at an international policy level.

Additionally, we received funding from the University of Minnesota's One Health Partnership to investigate the use of virtual communication technologies to enhance collaboration and social innovation in wildlife disease risk analysis.

CBSG has always emphasized a participatory, collaborative approach to practical problem-solving with a philosophy of openness and inclusiveness. Today, available technological tools—web-based meeting sites, online collaborative document creation, and videoconferencing, to name a few examples—will allow us to engage this philosophy on a greater scale. This One Health Partnership project brings these concepts to the forefront of our thinking, engaging the leaders in the field of wildlife health in meaningful discussion of the implications of these virtual tools, and developing a Wildlife Disease Risk Analysis Training Module through the use of this technology.

Finally, we are excited to announce that in 2011, a significant grant was awarded to a core group of researchers, including CBSG staff, to advance our efforts in the use of metamodeling tools for endangered species risk assessment. As part of this five-year effort, we plan to completely revise and update our wildlife disease epidemiology software package Outbreak, making it a more flexible and powerful tool for understanding and managing disease in wildlife systems.

For more than a decade, CBSG has worked with partners around the world to build new and creative mechanisms for assessing and managing the impacts of disease on biodiversity. Driven by the extent of our activities in 2011, we have the momentum to carry our work forward through this decade and beyond.





NEW INITIATIVES











THE ONE PLAN APPROACH: **INTEGRATED SPECIES CONSERVATION PLANNING**

As habitats are increasingly altered and wildlife populations impacted by human activities, a growing number of the world's species are threatened with extinction. Wide-spread threats such as habitat loss, poaching, invasive species, and disease often lead to smaller, isolated populations that may require intensive management to avoid extinction while concurrent conservation activities battle these threats. Effective population management across an emerging continuum that bridges wild and intensively managed conditions can serve as an important tool in our conservation toolbox to prevent species extinction.

Traditionally, species population planning has followed two parallel but separate tracks. Field biologists, wildlife managers, and conservationists monitor wild populations, evaluate threats, and develop conservation strategies and actions to conserve threatened species in the wild. Meanwhile, the zoo and aquarium community develops long-term goals for ex situ populations, sometimes without full access to information about the threats faced by the species' wild counterparts and the opportunities for supporting those populations. While each management plan strives for viability of a particular population, too seldom are these plans developed together to maximize the conservation benefits to the species.

CBSG supports an integrated approach to species conservation planning through the joint development of management strategies and conservation actions by all responsible parties to produce one comprehensive conservation plan for the species, or a "One Plan Approach." Integrated species planning is not a new concept: such holistic conservation efforts have led to several well-known conservation successes, from golden lion



tamarins in Brazil to Puerto Rican crested toads in the Caribbean to Arabian oryx in the Middle East. Our vision is to make comprehensive conservation planning more commonplace and effective.

Assessment of threats to wild populations and evaluation of potential strategies to address those threats should consider the wide array of options offered by intensive population management, and if and how these tools might promote conservation of the species in the wild. Options include source populations for demographic or genetic supplementation, assurance populations against imminent threats such as disease or invasive species, research populations to develop monitoring or management techniques, and headstart programs that temporarily shelter juveniles from high mortality and promote population growth. In turn, wild populations may boost the viability of *ex situ* populations by supplying genetic founders that can or must be removed from the wild, such as excess offspring, or nuisance or injured individuals that cannot be released.

Many of CBSG's current activities support the One Plan Approach, including our involvement in the revision of the IUCN Technical Guidelines for the Management of Ex Situ Populations for Conservation, formation of species prioritization tools, development of modeling tools for metapopulation management, and expansion of processes that bring all stakeholders together to use these tools to create more effective species management plans. Previous CBSG workshops for species such as the Okinawa rail, red-headed wood pigeon, and black-footed ferret developed integrated species conservation plans across an interactive wild-ex situ spectrum. Our goal is to actively promote this approach in the coming years so that the resulting integrated conservation plans can use the full suite of approaches available to ensure the future of threatened species in the wild.



2011 PHVA AND SPECIES CONSERVATION PLANNING WORKSHOPS AND SPONSORS

Elephant Herpesvirus Workshop, USA

Houston Zoo

Giant Otter PVA, Brazil CBSG Brasil

Giant Panda Ex Situ Technical Meeting, China Copenhagen Zoo; Changsha Zoo; Chengdu Research Base of Giant Panda Breeding

Great Ape Cardiovascular Disease Workshop, USA Zoo Atlanta

IUCN Western Ghats Freshwater Biodiversity Evaluation Workshop, India The International Union for Conservation of Nature (IUCN)

Mesoamerican and Caribbean Manatee PHVA, Costa Rica

Escuela de Ciencias Biológicas; Fundazoo pro Zoológicos (FUNDAZOO); SeaWorld; Sociedad Mesoamericana para la Biología y la Conservación (SMBC), Capítulo Costa Rica; Tropical Science Center; Universidad Nacional (UNA); US Geological Survey

Northern Jaguar Recovery Planning PVA and PHVA, USA Northern Jaguar Project; US Fish and Wildlife Service

Puma PVA, Brazil ICMBio; ProCarnivoros

Red-billed Curassow in the Atlantic Forest Workshop, Brazil CBSG Brasil

Regional Mapping and Conservation Planning Workshop for Wild Cattle and Buffaloes in South Asia, India Wildlife Institute of India, Dehradun

Rio Grande Silvery Minnow PVA (2 Meetings), USA Middle Rio Grande Endangered Species Collaborative Program

Scoping Meeting, Tasmanian Devil Insurance Program Review, Australia Tasmanian Department of Primary Industry, Parks, Water and Environment

Southern Ground Hornbill Reintroduction Meeting, South Africa National Zoological Gardens of South Africa

Tiger SSP Masterplan Meeting, USA CBSG; Potter Park Zoo

Western Chimpanzee PHVA for Sierra Leone, Sierra Leone Alice and Torben Frimodt's Foundation; Association Beauval Conservation & Recherche; Copenhagen Zoo; Hamilton Zoo; Sweden Chimpanzee Trust

Western Ghats Reptile Red List Workshop, India The Critical Ecosystem Partnership Fund (CEPF)

PHVA and Species Conservation Planning

Using CBSG's structured tools for issue formulation and problem solving across a broad range of disciplines, stakeholders collaborate in development of effective recommendations for species conservation action, including the identification of personal responsibilities and timelines to ensure that the recommendations become reality. Our Population and Habitat Viability Assessment (PHVA) process combines this approach with traditional population viability analysis (PVA) methodologies to enhance both the process and product of the species conservation planning workshop. CBSG also assists with planning for intensively managed populations.

In 2011, CBSG led or co-led 18 PHVA and Species Conservation Planning Workshops on 1,407 species in 8 countries, involving a total of 504 people from 294 organizations.

Training in Conservation Techniques

CBSG offers training courses in a variety of skills that build capacity and promote effective conservation. Facilitation courses allow participants to hone their skills in structured decision making, communication, group dynamics, and conflict resolution. Courses in risk assessment and modeling provide an overview of population biology and conservation planning, focusing on the use of simulation methods for evaluating extinction risk under various management strategies. Training is also available in *ex situ* population management principles, techniques, and software. Other types of conservation-related training courses are offered periodically to meet the specific needs of organizations or regions.

In 2011, CBSG led 16 Training Workshops in 8 countries, involving a total of 356 people from 338 organizations.



2011 TRAINING WORKSHOPS AND SPONSORS

Getting Along with Elephants: Educator Training in Human Elephant Coexistence (HECx) (3 Workshops), Thailand Columbus Zoo and Aquarium; Köln Zoo; US Fish and Wildlife Service

HECx Refresher Course, India International Elephant Foundation (IEF)

Human Elephant Coexistence Educator Training (3 workshops), India

International Elephant Foundation (IEF)

PMx Overview for EAZA, Netherlands European Association of Zoos and Aquaria (EAZA)

PMx Population Management Training for CAZG, China Chinese Association of Zoological Gardens (CAZG); Smithsonian Conservation Biology Institute; State Foreign Expert Bureau (China); World Association of Zoos and Aquariums (WAZA)

PMx Population Management Training for CMAG, New Zealand

Hamilton Zoo

PMx Population Management Training for ZAA, Australia Zoo and Aquarium Association (ZAA)

Population Management Training, Australia

Taronga Zoo

Small Mammal Field Techniques and Conservation Training, India

CBSG; Chester Zoo; Columbus Zoo and Aquarium; Knowsley Safari Park

Studbook and Population Management Training for PKBSI/ PHPA, Indonesia

Apenheul Zoo; Banham Zoo (Africa Alive); Chester Zoo; Fort Wayne Children's Zoo; Natural Science Center of Greensboro; Opel-Zoo; Point Defiance Zoo & Aquarium; Point Defiance Zoo Society; Point Defiance American Association of Zoo Keepers; Seneca Park Zoo; Taman Safari Indonesia; World Association of Zoos and Aquariums (WAZA); Wildlife Conservation Society/Bronx Zoo

Vortex Population Modeling Training, Denmark

Copenhagen Zoo

Wildlife Welfare Educator Training Workshop, India

Universities Federation for Animal Welfare

2011 TOOL DEVELOPMENT WORKSHOPS AND SPONSORS

Disease Risk Analysis Tools Development, New Zealand

Auckland Zoo; CBSG; Landcare Research; New Zealand Department of Conservation

2011 PLANNING WORKSHOPS FOR CONSERVATION ORGANIZATIONS AND SPONSORS

AAZK Strategic Planning, USA American Association of Zoo Keepers

Feral Animal Population Dynamics Think Tank, USA Leonard X. Bosack and Bette M. Kruger Foundation; PetSmart Charities

Invasive Species Meeting, USA US Department of Agriculture, Animal and Plant Health Inspection Service (APHIS)

IUCN SSC Species Conservation Planning Subcommittee, UK The International Union for Conservation of Nature (IUCN)

NIMBioS Investigative Workshop: Free-Roaming Cats, USA National Institute for Mathematical and Biological Synthesis (NIMBioS), University of Tennessee

Population Management Center Planning Workshop, New Zealand Auckland Zoo

University of Minnesota Pathogen and Disease Meeting, USA University of Minnesota

WAZA Future of International Studbooks Workshop, Switzerland CBSG; Copenhagen Zoo; World Association of Zoos and Aquariums (WAZA)

WAZA Global Population Management Discussion, Switzerland CBSG; Copenhagen Zoo; World Association of Zoos and Aquariums (WAZA)

Workshop on Formulating an EU Strategy for Ex Situ Conservation of Wild Species, Belgium Copenhagen Zoo; Environment Directorate-General of the European Commission; European Association of Zoos and Aquaria (EAZA)

Zoos, Aquariums and Botanical Gardens in Mesoamerica (AMACZOOA/CBSG Mesoamerica Meeting), Costa Rica

Costa Rican National Museums Network (REDCOMUS); Fundación pro Zoológicos (FUNDAZOO)

Tool Development

One of CBSG's most valuable and consistent strengths is in development and application of a variety of tools designed to help conservation professionals manage biodiversity. These tools can range from quantitative simulation software rooted in the science of population biology and decision analysis, to sophisticated facilitation techniques intended to identify levels of agreement across alternative conservation strategies among diverse stakeholder groups. We are committed to evaluating and improving the contents of our "conservation toolkit." In addition, collaboration with other conservation organizations gives us access and exposure to new tools that can help us broaden our capabilities and increase our effectiveness.

In 2011, CBSG conducted one meeting expressly devoted to Tool Development, involving 23 people from 20 organizations.

Planning for Conservation Organizations

CBSG works with conservation organizations, including wildlife agencies, zoological parks, associations of conservation professionals, and similar groups to develop plans for conservation action. From strategic planning for national wildlife refuges to developing zoo conservation master plans, CBSG leads stakeholders from the establishment of a vision through the exploration of issues and the development of goals to cultivate a conservation culture and to guide future actions.

In 2011, CBSG led or co-led 11 Planning Workshops for Conservation Organizations in 6 countries, involving a total of 208 people from 133 organizations.



2011 SPONSORS OF CBSG CONFERENCE PARTICIPATION

American Association of Zoo Veterinarians Annual Conference, USA CBSG

Asian Zoo Educators Conference, Taiwan Taipei Zoo

AZA Annual Conference, USA CBSG; Chicago Zoological Society

Global Conference on Entomology, Thailand Chester Zoo

International Symposium on the History of Zoos and Aquariums, UK Chester Zoo

IUCN Red Listing Process in India Steering Committee (3 Conferences), India Ministry of Environment, New Delhi

IUCN Reintroduction Task Force Meeting, UAE Al Ain Wildlife Park Resort

CBSG Strategic Committee Midyear Meeting, Switzerland CBSG; Chester Zoo

SSC Steering Committee Meeting, Indonesia The International Union for Conservation of Nature (IUCN) Species Survival Commission (SSC)

WAZA Annual Conference, Czech Republic CBSG

WAZA Committee for Population Management Meeting, Switzerland CBSG

ABOUT CBSG

The Conservation Breeding Specialist Group (CBSG) is a global volunteer network of over 500 conservation professionals, coordinated by a headquarters staff of six and assisted by nine Regional and National Networks on six continents. This network is dedicated to saving threatened species through conservation planning. CBSG is recognized and respected for its use of innovative, scientifically sound, collaborative processes that bring together people with diverse perspectives and knowledge to catalyze positive conservation change. CBSG is a Specialist Group of the Species Survival Commission of IUCN—The International Union for Conservation of Nature, and is supported by a non-profit organization incorporated under the name Global Conservation Network.



www.iucn.org

The International Union for Conservation of Nature (IUCN) brings together states, government agencies, and a diverse range of nongovernmental organizations in a unique world partnership that seeks to influence, encourage and assist societies throughout the world in conserving the integrity and diversity of nature and to ensure that any use of natural resources is equitable and ecologically sustainable.



http://iucn.org/about/work/programmes/species/who_we_are/about_ the_species_survival_commission_/

The Species Survival Commission is the largest of IUCN's six volunteer Commissions, with a global membership of 8,000 experts. SSC advises IUCN and its members on the wide range of technical and scientific aspects of species conservation and is dedicated to securing a future for biodiversity.

History

Since its inception in 1979, CBSG has assisted in the development of conservation plans involving over 240 species through more than 500 workshops held in 67 countries. CBSG has collaborated with more than 190 zoos and aquariums, 180 conservation non-governmental organizations (NGOs), 65 universities, 50 government agencies, and 35 corporations. By applying unique conservation tools and training others in their use, CBSG contributes to the long-term sustainability of endangered species and ecosystems around the globe.

Our Approach to Conservation

CBSG promotes effective and comprehensive conservation action by emphasizing the exchange of information across diverse groups to reach agreement on the important challenges facing humans and wildlife. Our interactive, participatory conservation planning workshops provide an objective environment, expert knowledge, and thoughtful group facilitation designed to systematically analyze problems and develop focused solutions using sound scientific principles. This process enables workshop participants to produce meaningful and practical management recommendations that generate political and social support for conservation action at all levels, from local communities to national political authorities. Rapid dissemination of these recommendations allows them to be used almost immediately to influence stakeholders and decision-makers, and maintains the momentum generated at the workshop.



2011 ULYSSES S. SEAL AWARD FOR INNOVATION IN CONSERVATION

Ulie Seal's great passion and talent was his creative thinking about how new science could be most effectively applied to solving the problems of wildlife conservation. His contributions were amplified many times over by his further ability to recognize, encourage, and collaborate with others who were also making such innovative contributions. Fittingly, CBSG has chosen to honor Ulie, the founder and first Chairman of CBSG, by creating the Ulysses S. Seal Award for Innovation in Conservation.



Ulysses S. Seal Award Winners

2011 William Conway, Wildlife Conservation Society, USA
2010 Gordon McGregor Reid, Chester Zoo, UK
2009 Lena Lindén, Nordens Ark, Sweden
2008 Sally Walker, Zoo Outreach Organisation, India
2007 Paul Pearce-Kelly, Zoological Society of London, UK
2006 Jonathan Ballou, Smithsonian National Zoological Park, USA
2005 Georgina Mace, Natural Environment Research Council (NERC) Centre for Population Biology, Imperial College, London, UK
2004 Frances Westley, University of Waterloo, Canada

2003 Nathan Flesness, International Species Information System, USA



The 2011 Ulysses S. Seal award was presented to William Conway, a true innovator in the multi-faceted field of zoo and conservation biology. Bill began his career as a volunteer keeper in the reptile department of the Saint Louis Zoo and gradually moved through the ranks of keeper, curator, and assistant to the director, eventually becoming the General Director and President of the Wildlife Conservation Society until his retirement in 1999. But Bill's work did not cease with retirement: he remains an active and influential member of the conservation community today.

Bill founded AZA's Species Survival Plan (SSP) Committee and Field Conservation Committee, and helped write its first Field Conservation Manual. He compelled the zoo community to recognize that species conservation, even as practiced by zoos, must include integrated approaches that combine responsible management of assurance populations, protection of remaining wild populations, scientific study, and inspiration and education of the general public.

The Ulysses S. Seal Award joins many other deserved awards on Bill Conway's shelf, all of which recognize his great impact on zoos, the IUCN SSC, bird conservation, exhibit design, field programs, developing science in zoos, and many more areas of conservation. We choose to honor Bill with this award, but also hope to honor him by following his example of working inexhaustibly to protect species so that they do not vanish from zoos, from wildlife reserves, or—especially—from their wild habitats.

CBSG DONORS



\$10,000 and above

Chester Zoo* Dallas World Aquarium* Houston Zoo* San Diego Zoo Global Zoo Leipzig*

\$5,000 and above

Al Ain Wildlife Park & Resort Auckland Zoological Park British and Irish Association of Zoos and Aquariums Cleveland Metroparks Zoo Perth Zoo* Point Defiance Zoo & Aquarium Sedgwick County Zoo Toledo Zoo Twycross Zoo*

\$2,000 and above

Alice Andrews Allwetterzoo Münster Borås Djurpark* Bristol Zoo Gardens Cincinnati Zoo & Botanical Garden Dickerson Park Zoo Dublin Zoo Gladvs Porter Zoo Hong Kong Zoological & Botanical Gardens Japanese Association of Zoos & Aquariums Laurie Bingaman Lackey Linda Malek Marwell Wildlife Milwaukee County Zoo North Carolina Zoological Park Paignton Zoo

Royal Zoological Society of Antwerp San Francisco Zoo Schönbrunner Tiergarten – Zoo Vienna* Taronga Conservation Society Australia Union of German Zoo Directors Wassenaar Wildlife Breeding Centre Wilhelma Zoo Zoo & Aquarium Association Zoologischer Garten Köln

\$1,000 and above

Aalborg Zoo Akron Zoological Park Audubon Zoo Central Zoo Authority, India Colchester Zoo Conservatoire pour la Protection des Primates Cotswold Wildlife Park Dallas Zoo Detroit Zoological Society Fort Wayne Children's Zoo Fota Wildlife Park Fundación Parques Reunidos Givskud Zoo International Animal Exchange, Inc. and African Safari Wildlife Park Kansas City Zoo Los Angeles Zoo Nordens Ark* Ocean Park Conservation Foundation* Palm Beach Zoo at Dreher Park Philadelphia Zoo Prudence P. Perry Ringling Bros., Barnum & Bailey Rotterdam Zoo Royal Zoological Society of Scotland -Edinburgh Zoo San Antonio Zoo

Seoul Zoo Skansen-Akvariet Swedish Association of Zoological Parks & Aquaria Taipei Zoo The Living Desert Thrigby Hall Wildlife Gardens Utah's Hogle Zoo Woodland Park Zoo Zoo Frankfurt Zoological Society of Wales – Welsh Mountain Zoo Zoologischer Garten Rostock Zoos South Australia

\$500 and above

Alice Springs Desert Park Banham Zoo Brandywine Zoo Edward & Marie Plotka Friends of the Rosamond Gifford Zoo GaiaPark – Kerkrade Zoo Jacksonville Zoo & Gardens Katey & Mike Pelican Knuthenborg Safaripark Lisbon Zoo Little Rock Zoo Odense Zoo Oregon Zoo Ouwehands Dierenpark Riverbanks Zoo & Garden Topeka Zoo Wellington Zoo Wildlife World Zoo & Aquarium Zoo de la Palmyre

\$250 and above Arizona-Sonora Desert Museum Bramble Park Zoo

David Traylor Zoo of Emporia Ed Asper International Centre for Birds of Prey Lee Richardson Zoo Lincoln Park Zoo Mark Barone Mohawk Fine Papers Racine Zoological Gardens Roger Williams Park Zoo Rolling Hills Wildlife Adventure Sacramento Zoo Susie Byers & Family Tautphaus Park Zoo Tokyo Zoological Park Society

\$100 and above

African Safari – France Aquarium of the Bay Chahinkapa Zoo Darmstadt Zoo Lion Country Safari Miami Metrozoo Safari de Peaugres Steven J. Olson Touroparc – France

\$50 and above

Alameda Park Zoo Elaine Douglass Oglebay's Good Zoo Parker Byers Schwarzkopf Robert Lacv Stiftung Foundation for Tropical Nature & Species Conservation

\$15 and above Sean R. Walcott

*Denotes Chair Sponsor





2011 STRATEGIC COMMITTEE

Brad Andrews SeaWorld Parks & Entertainment, USA

Jonathan Ballou Smithsonian Conservation Biology Institute, USA

Evan Blumer OsoMono LTD, USA

Jeffrey Bonner Saint Louis Zoo, USA

Paul Boyle Association of Zoos and Aquariums, USA

Amy Camacho Africam Safari, Mexico

Luis Carrillo Zoofari, Mexico

William Conway Wildlife Conservation Society, USA

Robert Cook Wildlife Conservation Society, USA

Mark Craig Village Roadshow Theme Parks, Australia

Doug Cress UNEP GRASP, Kenya

James Cretney Marwell Wildlife, UK

Arnaud Desbiez Royal Zoological Society of Scotland, Brazil

Gerald Dick World Association of Zoos and Aquariums, Switzerland

Lesley Dickie European Association of Zoos and Aquaria, Netherlands

Lee Ehmke Minnesota Zoo, USA

Susie Ellis International Rhino Foundation, USA

Nathan Flesness International Species Information System, USA

Suzanne Gendron Ocean Park Conservation Foundation, Hong Kong

Jo Gipps Bristol Zoo Gardens, UK **Heribert Hofer** Leibniz-Institut für Zoo und Wildtierforschung, Germany

Bengt Holst Copenhagen Zoo, Denmark

Mike Jordan National Zoological Gardens of South Africa, South Africa

Shigehisa Kawakami Gunma Safari Park / JAZA, Japan

Robert Lacy Chicago Zoological Society, USA

Lena M. Lindén Nordens Ark, Sweden

Dave Mallon Antelope Specialist Group, UK

Jansen Manansang Taman Safari Indonesia, Indonesia

Yolanda Matamoros Simón Bolívar Zoo, Costa Rica

Mike Maunder Al Ain Wildlife Park and Resort, UAE

Phil McGowan World Pheasant Association, UK

Gordon McGregor Reid Chester Zoo, UK

Sanjay Molur Zoo Outreach Organisation, India

Dave Morgan African Association of Zoos and Aquaria, South Africa

Jackie Ogden Disney's Animal Kingdom, USA

Theo Pagel Zoologischer Garten Köln, Germany

Paul Pearce-Kelly Zoological Society of London, UK **Bill Rapley** Toronto Zoo, Canada

Ivan Rehak Prague Zoo, Czech Republic

Alex Rübel Zoo Zürich, Switzerland

Rebecca Seal Soileau US Army Corps of Engineers, USA

Lee Simmons Omaha Zoo Foundation, USA

Mark Stanley Price University of Oxford, WildCRU, UK

Miranda Stevenson British and Irish Association of Zoos and Aquariums, UK

Stuart Strahl Chicago Zoological Society, USA

Gloria Svampa Museo Civico di Zoologia di Roma, Italy

Yasumasa Tomita Tokyo Zoological Park Society, Japan

Kris Vehrs Association of Zoos and Aquariums, USA

Sally Walker Zoo Outreach Organisation, India

Chris West Zoos South Australia, Australia

Frances Westley University of Waterloo, Canada

Robert Wiese San Diego Zoo Global, USA

Jonathan Wilcken Auckland Zoo, New Zealand

David Wildt Smithsonian Conservation Biology Institute, USA



		Temporarily		ASSETS	
	Unrestricted	Restricted	Total	Current Assets:	
Support and Revenue:				Cash	US\$797,880
Contributions	US\$545,956	US\$539,675	US\$1,085,631	Pledges Receivable	128,760
Workshops and Contracts	275,694	-	275,694	Prepaid Expenses	2,733
Other Program Service Fees	9,635	_	9,635	Total Current Assets	929.373
Sales Revenue (Net Cost of Goods Sold of \$3,243 in 2011 and \$0		-			
in 2010)	1,605		1,605		265,051
	10 1 17			Pledges Receivable	301,977
Investment Income	(2,447)		(2,447)	Property and Equipment - Net	1,564
Other Income	_	-	_	Total Assets	US\$1,497,965
Net Assets Released from Restrictions:				LIADULTIES & NET ASSETS	
Satisfaction of Program Restrictions	_	-	_		
Satisfaction of Time Restrictions	36,245	(36,245)	_	Current Liabilities:	4 1 → (
Total Support and Revenue	866,688	503,430	1,370,118	Accounts Payable	\$1,766
				Accrued Salaries	12,38/
Expense:				Accrued Vacation	11,806
Program Services	584 667	_	584 667	Deferred Workshop Revenue	_
Support Services:	001,007		001,00,	Funds held for Others	59,904
Management and General	180,779	_	180,779	Total Current Liabilities	85,863
Fundraisina	81,715	_	81.715		
Total Support Services	262,494		262,494	Net Assets:	
Total Expense	847,161	_	847,161	Unrestricted	872,427
Change in Net Assets	19.527	503,430	522.957	Temporarily Restricted	539,675
Net Assets - Beginning of Year	852900	36 24 5	889145	Total Net Assets	1,412,102
Net Assets - End of Year	US\$872,427	US\$539,675	US\$1,412,102	Total Liabilities & Net Assets	US\$1,497,965

Notes to 2011 Financial Statements

The finances to support the work of CBSG and related species conservation activities are held and managed by the Global Conservation Network (GCN), a USA 501(c)3 not-for-profit organization. CBSG manages the financial aspects of Amphibian Ark activities as part of our commitment to AArk's success. GCN had an overall surplus of about US \$523,000 for the year in 2011. Our unrestricted activity (general operations) accounted for approximately US \$19,600 of this increase, with the remaining US \$503,400 increase related to restricted activity. As of December 31, 2011, we had an unrestricted net asset reserve of US \$872,400, or seventeen months of operating expenses. Two components make up the temporarily restricted net asset reserve at year end; about US \$530,400 is for CBSG Chair support and US \$9,300 is for 2012 CBSG commitments. The information on the opposite page was taken from the 2011 audit. Copies of the full audit can be obtained by contacting the CBSG office.



Statement of Financial Position at December 31, 2011

CBSG HEADQUARTERS STAFF





Philip Miller nior Program Officer





Kathy Traylor-Holzer

Senior Program Officer



Virginia Lindgren

Administrative Assistant

Communications and Technology

CBSG NETWORKS

Our Regional Networks take CBSG tools and principles deep into the local institutions of a region or country, allowing stakeholders to adapt our proven conservation techniques to meet their own unique needs. We believe that this freedom to shape a Network according to the needs of the culture, society, and services of the individual country is a requirement for successfully addressing the sheer magnitude of the problem of biodiversity loss on this planet, as well as the diversity in environment, culture and social systems, economic conditions, policy and governance, and philosophy in different countries and regions. CBSG network staff members organize most of the activities local to their network and often assist with other CBSG activities around the world.



CBSG Australasia **Co-Convenor: Caroline Lees** Auckland Zoo



Co-Convenor: Richard Jakob-Hoff Auckland Zoo



CBSG Brasil **Convenor: Arnaud Desbiez** oyal Zoological Society of Scotland



CBSG Europe Convenor: Bengt Holst Copenhagen Zoo



CBSG Indonesia Convenor: Jansen Manansana aman Safari Indonesia



CBSG Japan Advisor: Hiroshi Hori



CBSG Mesoamerica **Convenor: Yolanda Matamoros** món Bolívar Zoo



CBSG México **Convenor: Luis Carrillo**



CBSG South Asia Co-Convenor: Sally Walker Zoo Outreach Organisation



Co-Convenor: Sanjay Molur Zoo Outreach Organisation



CBSG Southern Africa Convenor: Mike Jordan National Zoological Gardens of South Africa

Photography Courtesy of:

Dante Fenolio Sammy Gould Ryan Hagerty, USFWS Katie Holzer Kristin Leus Linda Malek Sanjay Molur Keith Ramos, USFWS Gaylen Rathburn, USFWS Kathy Traylor-Holzer Emily Wick

Photos:

Sammy Gould: Lioness, p. 11 Mike Jordan: Southern ground hornbill - adult female, Mabula, South Africa, p. 4 Michio Kinjyo: Okinawa Rail, p. 12 Clay Myers Photography: Tabby Wh - Cat on Street, p. 6 Keith Ramos: Manatee, p. 7 Antonio Rivas Salvador: Iberian lynx ex situ Program, p. 12 Kathy Traylor-Holzer: hornbill habitat, p.4; population management photos p. 7; manatee habitat, p. 8; chimpanzee habitat, p. 9

Ulysses S. Seal Award Photos:

Success Story and Initiative Rodrigo Basaure: Street Cats, p. 6

Special Acknowledgements

Frands Carlsen: Tacugama, Sierra Leone, p. 9

Linda Malek is a strategic planning, business development, and marketing specialist based in southern California. She currently donates her expertise to CBSG as we enhance stakeholder communication and increase targeted development efforts, and has directed EDG in the design of this Annual Report and other marketing and development tools.

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Sustainability

We are proud to partner with Mohawk Fine Papers and B&G House of Printing in California to bring you our 2011 Annual Report. This report was printed on Mohawk Options Smooth Digital with i-Tone 100% PC White, which contains 100% PCW (post-consumer waste), FSC (Forest Stewardship Council) certified, and made with 100% Windpower. Only the exact number of Annual Reports required were printed.

Join us in our continuing efforts to reflect sustainability within our own organization by visiting the CBSG website and downloading the electronic version of the Annual Report.

Printed on 100% post-consumer fiber





Christa Conway: Close-up-WC in Patagonia 2009, p. 19 Graham Harris: WC at Laguna Colorada, Bolivia, flamingo



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